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THESIS

ACQUISITION OF TELECOMMUNICATIONS IN THE NAVY FROM AN AUTOMATIC DATA PROCESSING (ADP) POINT OF VIEW

by

Ann Margaret Sheedy

March 1982

Thesis Advisor: Norman R. Lyons

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This thesis effort is a study of telecommunications acquisition in the Navy from an Automatic Data Processing (ADP) point of view. From their perspective, the ADP community wants to see improvements made to telecommunications acquisition in order to benefit themselves and the communications community. The principal elements of the study concern the current management environment of telecommunications and ADP according to guidance provided in directives and instructions. The specific areas which receive attention are policy, levels

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of requirements/AIS, dollar/approval thresholds, procedures/schedule for submitting plans, submitting authority, validation authority, and approval authority. Finally, the study reviews and evaluates telecommunications acquisition, focusing on problems and their causes as seen by the ADP community. Recommendations for solutions to the problems are provided.

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Acquisition of Telecommunications in the Navy from an Automatic Data Processing (ADP) Point of View

by

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Lieutenant, United States Navy
B.A., University of Texas, 1977

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN
TELECOMMUNICATIONS SYSTEMS MANAGEMENT

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ABSTRACT

This thesis effort is a study of telecommunications acquisition in the Navy from an Automatic Data Processing (ADP) point of view. From their perspective, the ADP community wants to see improvements made to telecommunications acquisition in order to benefit themselves and the communications community. The principal elements of the study concern the current management environment of telecommunications and ADP according to guidance provided in directives and instructions. The specific areas which receive attention are policy, levels of requirements/AIS, dollar/approval thresholds, procedures/schedule for submitting plans, submitting authority, validation authority, and approval authority. Finally, the study reviews and evaluates telecommunications acquisition, focusing on problems and their causes as seen by the ADP community. Recommendations for solutions to the problems are provided.

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I. INTRODUCTION

A. GENERAL

The management environment of telecommunications and Automatic Data Processing (ADP) are similar, but different. Today, management of telecommunications in the Navy is basically accomplished through guidelines provided in various documents dealing with telecommunications policy and procedures. One such document, the Department of Defense (DOD) Directive 4630.1, dated 1968, is applicable throughout the DOD. This Directive provides guidance, establishes procedures, and assigns responsibilities for the programming of major telecommunications requirements and the development of plans to support such. [Ref. 1] The Navy has interpreted DOD Directive 4630.1 and has implemented its guidelines in the Navy instructions.

Management of ADP in the Navy is also accomplished through guidelines provided in various documents relating to ADP policy and procedures. Through DOD Directive 7920.1 and DOD Instruction 7920.2, both dated 1978, the Navy has implemented Life-Cycle Management (LCM) of Automated Information Systems (AIS). These documents establish policies, procedures and responsibilities which will be used by the Navy in managing ADP. [Ref. 2]

Recently, technological advances have created an interdependence of data processing and telecommunications equipment. From an ADP community perspective, this interdependence creates a need to take a closer look at the telecommunications management procedures in the Navy. Evaluation of these procedures may result in more efficient and effective telecommunications management in relation to ADP. The ADP community would be the main benefactor and the communications community would also benefit. Thus, this thesis proposes to review and evaluate the management of telecommunications in the Navy from an ADP point of view.

B. OBJECT OF RESEARCH

The purpose of this research is to review and evaluate the telecommunications management environment from an ADP point of view and to determine if a more efficient and effective relationship can exist with the ADP environment. Basically, areas in each management environment to be examined are policy, levels of requirements, dollar thresholds, procedure/schedule for submitting plans, submitting authority, validation authority, and approval authority. These areas in the telecommunications management environment will be reviewed and evaluated as possible problems in relation to an ADP management environment. If problems exist, then causes of the problems will be identified and recommendations for resolving these problems

will be developed in order to help streamline the management process of acquiring telecommunications for ADP actions.

C. RESEARCH QUESTIONS

The primary question considered in this research is, "How does the Navy manage telecommunications in relation to ADP and vice versa?" The author chose this as the primary question because one of the major points to consider in this study is the relationship between telecommunications and ADP. As stated earlier in the "General" section, there is a growing interdependence between telecommunications support and data processing because of technological advances. More and more each day, ADP requires telecommunications support, especially leased services, in order to meet the needs of their users. This thesis will revolve around the primary question plus subsidiary research questions. The subsidiary questions are, "How are the management procedures different?"; "Are there problems created in acquiring telecommunications services for ADP systems because of the differences?"; "If there are problems, what may be the causes?"; and "What are the recommendations for resolving the problems, if there are any?" These questions will be answered in the chapters of this thesis.

D. SCOPE, LIMITATIONS, ASSUMPTIONS

This thesis is motivated by the Naval Data Automation Command (NAVDAC), who reviewed and saw improvements to the management of telecommunications in the Navy from an ADP perspective. The scope of this thesis pertains to the Navy's management procedures of telecommunications and ADP, problems with the procedures, possible causes to the problems, and recommendations. Boundaries were put on the research in order to limit the scope of the subject. The boundaries are as follows: ADP is considered non-tactical according to the Secretary of the Navy Instruction (SECNAVINST) 5231.1A of 20 November 1979; an AIS is considered developmental only; the ADP and telecommunications procedures are considered only for the Continental United States (CONUS); ADP and communications security requirements and equipment are not discussed in this thesis; the management procedures for implementation of ADP and telecommunications are not covered by this study; and telephone management and ADP transportable field units are not included in the scope of this thesis. This thesis is a study pertaining to management procedures and possible actions may be taken on the recommendations for improving and streamlining the acquisition of telecommunications needed to support ADP systems. The limitation to this thesis is that implications to the recommendations are not considered here. The implications may be the subject for another thesis.

The author assumes that individuals who read this thesis have some understanding of management practices and a basic knowledge of the Navy's telecommunications and ADP management procedures and terminology. A list of abbreviations and definitions used in this thesis are attached as Appendix A.

E. METHODOLOGY

The basic methodology used in this thesis is one of evaluation. In particular, various directives and instructions will be reviewed and evaluated. The process begins with the most important DOD Directives and a DOD Instruction pertaining to the management of telecommunications and ADP. These documents include DOD Directive 4630.1, "Programming of Major Telecommunications Requirements," dated 24 April 1968 [Ref. 3] DOD Directive 7920.1, "Life-Cycle Management of Automated Information Systems (AIS)," dated 17 October 1978 [Ref. 4]; and DOD Instruction 7920.2, "Major Automated Information Systems Approval Process," dated 20 October 1978. [Ref. 5] Then the most important Navy Instructions in the same areas will be reviewed and evaluated. These instructions include SECNAVINST 11120.1D, "Programming of Major Telecommunications Requirements," dated 19 November 1968 [Ref. 6]; Chief of Naval Operations Instruction (OPNAVINST) 2800.2, "Naval Telecommunications Systems (NTS) Operating Requirements," dated 2 January 1980 [Ref. 7]; Naval Telecommunications

Command Instruction (NAVTELCOMINST) 2880.1B, "Naval Telecommunications System (NTS) Management Procedures - Telecommunications Service Requests (TSRs)," dated 18 September 1980 [Ref. 8]; SECNAVINST 5231.1A, "Life-Cycle Management of Automated Information Systems within the Department of the Navy," dated 20 November 1979]Ref. 9]; and SECNAVINST 5230.6A, "Automatic Data Processing Approval Authority and Acquisition/Development Thresholds; delegation of," dated 31 August 1981. [Ref. 10] Other documentation pertaining to telecommunications and ADP management will also be reviewed and evaluated.

In addition to the above references, telephone conversations were also elicited from various organizations with regard to the development of this study. Among those organizations contacted were:

1. Communications Plans and Policy Branch (OP-941C) in the Office of Chief of Naval Operations, Command and Control (OP-094),
2. Information Systems Branch (OP-942D) in the Office of Chief of Naval Operations, Command and Control (OP-094),
3. Naval Telecommunications Command,
4. Naval Data Automation Command,
5. Army Communications - Headquarters,

6. Requirements and Policy Branch (AF.XOKCR) in the Office of the Deputy Chief of Staff, Operations, Plans, and Readiness of the United States Air Force.

F. DEFINITIONS AND ABBREVIATIONS

The definitions and abbreviations list is attached as Appendix A.

G. SUMMARY

The different preceding sections of this chapter have addressed the why, what and how the research is to be conducted. The "object of research" section mentioned what areas are to be examined. The following chapters in this thesis will discuss those basic areas. These areas include the current management environment of telecommunications and ADP in policy, levels of requirements, dollar thresholds, procedure/schedule for submitting plans, submitting authority, validation authority, and approval authority; problems in the management of telecommunications in relation to ADP management, with probable causes of these problems; and recommendations for resolving the problems.

The goal of considering management of telecommunications in the Navy from an ADP point of view is the streamlining of the process of acquiring telecommunications support for ADP systems.

II. CURRENT MANAGEMENT ENVIRONMENT OF TELECOMMUNICATIONS

A. INTRODUCTION

The increasing high costs of telecommunications support, especially of leased services, have resulted in high visibility of communications programs at all levels of government. This makes the need for management awareness and improved life-cycle documentation of telecommunications resources necessary. Management guidance in the form of instructions and a directive helps to identify and obtain resources needed to satisfy telecommunications requirements. [Ref. 11] Basically these instructions and directive are as follows: SECNAVINST 11120.1D, "Programming of Major Telecommunications Requirements," dated 19 November 1968, which implemented DOD Directive 4630.1, "Programming of Major Telecommunications Requirements," dated 24 April 1968; OPNAVINST 2800.2, "Naval Telecommunications System (NTS) Operating Requirements," dated 2 January 1980; and NAVTELCOMINST 2880.1B, "Naval Telecommunications System (NTS) Management Procedures - Telecommunications Service Requests (TSRs)," dated 18 September 1980. The directive and instructions cover such areas as policy, levels of requirements, dollar thresholds, procedure/schedule for submitting plans, submitting

authority, validation authority, and approval authority. Each of these areas will be discussed in turn with regard to the current management environment of telecommunications in the Navy, especially towards the support of ADP.

B. POLICY

According to OPNAVINST 2800.2, under general policy, major telecommunications requirements or other requirements which utilize the resources of or impact on the areas of telecommunications (systems, networks, or facilities) within the jurisdiction of a Commander of a Unified/Specified Command will be coordinated with the Commander concerned. This coordination will be accomplished by the submitting authority prior to forwarding requirements to higher authority. Telecommunications required to support automated data systems must be specifically identified as an integral part of such systems, and costs must be estimated as early as possible in the planning and programming cycle. Future telecommunications requirements identified and documented, and not previously programmed and budgeted will be programmed and budgeted by the command with Operations and Maintenance (O&M) responsibility. At budget review time, monies programmed for leased requirements will be transferred to Commander, Naval Telecommunications Command (COMNAVTELCOM).

Since this study deals with non-tactical ADP, non-tactical telecommunications requirements will normally be satisfied using existing or planned Defense Communications System (DCS) switching and transmission facilities. If DCS cannot provide the technical or critical operational capability required, then dedicated facilities will be provided.

COMNAVTELCOM will program and budget all Navy validated access line costs for DCS switched networks. A requirement for DCS switched service with a desired operational date less than 24 months into the future will be processed as an urgent operational requirement and must be fully justified and funds provided for a minimum of two years by the submitting authority. Validated requirements no longer needed must be identified for cancellation by the requiring activity or submitting authority. Requirements not validated or approved will be returned under separate cover to the submitting authority with the reasons for non-validation or disapproval. Issues which cannot be resolved between submitting authorities and COMNAVTELCOM will be referred to Chief of Naval Operations (CNO).

Specific policy in relation to dedicated circuits must be considered here, since dedicated circuits are one possible way data transmission for ADP is accomplished. As stated by OPNAVINST 2800.2, the use of dedicated circuits will be restricted to requirements which cannot be

satisfied by any other means. To qualify for dedicated service, a requirement must meet the test of one of the following criteria: essential characteristics, and costs. Essential characteristics include operational requirement, serviceability, responsiveness, and other pertinent technical or qualitative factors. To qualify solely on the basis of cost, dedicated service must significantly cost less than the use of DCS facilities, Automatic Digital Network (AUTODIN), other government systems, Advanced Record System (ARS), commercial, Wide Area Telecommunications Service (WATS), and Direct Distance Dial (DDD). Costs for other leased services will be the prevailing costs or tariffs. All cost figures used must be included in the requirements plan. A requirement that qualifies for dedicated service will be satisfied by the most economical transmission system. A primary or secondary backup requirement will share the use of other existing facilities wherever possible. Consolidation of dedicated facilities for shared use by similar activities will be accomplished whenever feasible. Whenever appropriate, low volume, full period circuits will be replaced by dial-up circuits. COMNAVTELCOM, in coordination with the submitting authority, will conduct a biennial review of dedicated networks and circuits to determine whether such networks and circuits will be continued or fulfilled through the use of DCS common user

networks. The general and dedicated circuits policies give overall basic guidance for the management of telecommunications.

C. LEVELS OF REQUIREMENTS

According to SECNAVINST 11120.1D and DOD Directive 4630.1, the telecommunications environment has three levels of requirements: major, below-threshold, and minor requirements. A major telecommunications requirement is defined as a telecommunications requirement exceeding $500,000 in investment cost for government-owned facilities, or exceeding $200,000 in total annual cost for leased facilities. A below-threshold or below-the-threshold requirement is defined as a telecommunications requirement costing more than $100,000, but less than $500,000 in investment cost for government-owned facilities or less than $200,000 annually in leased facilities costs. A minor requirement is defined as a telecommunications requirement costing $100,000 or less, whether the facility is government-owned or leased. The dollar thresholds for each level of requirements determines the management process of validation and approval by higher authority.

D. DOLLAR THRESHOLDS

In the preceding section, dollar figures were mentioned. These dollar figures are the dollar thresholds for the varmious levels of requirements. To briefly mention again, dollar thresholds for major telecommunications requirements are costs exceeding $500,000 in investment cost for government-owned facilities or $200,000 in total annual cost for leased facilities. Below-threshold requirements dollar thresholds are costs less than $500,000 for investment and $200,000 for leased facilities, but costing more than $100,000. Minor telecommunications requirements dollar threshold is a cost of $100,000 or less.

E. PROCEDURE/SCHEDULE FOR SUBMITTING PLANS

According to SECNAVINST 11120.1D, in order to facilitate effective program management and review, DOD Directive 4630.1 requires an annual submission of major telecommunications requirements and associated Program Change Requests (PCRs) on a consolidated basis to the Secretary of Defense (SECDEF) by 15 May each year. Before the SECDEF receives the information, submission of plans up the chain of command must occur. The procedure to accomplish this task is the telecommunications requirements process (see Enclosure (4) to Appendix B).

As stated by OPNAVINST 2800.2, the requirements process begins with the identification of telecommunication needs based upon the mission of the activity and the operational planning the activity must support. The user or Requiring Activity (R/A), who is defined as the O&M user that identifies and submits a telecommunications requirement to support missions/tasks/functions, identifies its telecommunications support needs and forwards these requirements via the chain of command to the submitting authority. The submitting authority reviews and comments on the requirements.

According to SECNAVINST 11120.1D, telecommunications requirements applicable to a geographical area in support of the operational responsibility of a Unified/Specified Commander will be submitted as amplified by the appropriate Unified/Specified Commander with copies to the CNO. Navy commands not assigned to a Unified/Specified Commander will submit major and below-threshold telecommunications requirements via the chain of command to the Commander, Naval Communications Command (COMNAVCOMM); now COMNAVTELCOM). As stated by OPNAVINST 2800.2, the submitting authority forwards the information to COMNAVTELCOM.

COMNAVTELCOM evaluates and validates minor telecommunications requirements. COMNAVTELCOM also

forwards major and below-threshold telecommunications requirements to CNO with appropriate recommendations.

In accordance with SECNAVINST 11120.1D, the major and below-threshold telecommunications requirements shall be submitted annually prior to 1 September using the format shown in Appendix C. Requirements received after the 1 September cut-off date will be held for submission on the following 1 September. Emergency requirements which cannot be deferred until the next submission date may be submitted at any time.

According to SECNAVINST 11120.1D, upon validation of major telecommunications requirements originated by commands of the Department of the Navy (DON) not under a Unified/Specified Command, CNO will coordinate with the Unified/Specified Commander when the requirement involves facilities into, within, or through the geographical area of responsibility of such a Commander.

If the telecommunications requirements are applicable to the DCS, then CNO will submit validated requirements to the Joint Chiefs of Staff (JCS) for processing. JCS will refer the requirements to the Defense Communications Agency (DCA) to determine the availability of existing resources.

If the telecommunications requirements are not applicable to DCS, then CNO will inform appropriate Program Element Sponsors. These sponsors will: prepare supporting Subsystem Project Plans (SPP), if required, according to

Appendix D; assure that resources necessary to support the requirements are included in annual Secretary of the Navy (SECNAV) Program Objectives (PO) submissions; prepare a draft PCR for inclusion in the Navy's consolidated communications submission; and submit the draft PCR together with the requirements and the SPP to COMNAVCOMM by 1 April in order that consideration of the PCRs may be accomplished and forwarded to CNO for submission in time to meet the SECDEF imposed deadline of 15 May.

As stated by SECNAVINST 11120.1D, if the telecommunications requirements are below-the-threshold, then the CNO reviews, validates and approves the requirements. Upon validation of the requirements below-threshold, CNO will inform SECDEF and JCS of the approval. Then CNO will insure that necessary supporting plans are prepared and necessary resources to support the requirement are included in an appropriate PCR submission to SECDEF. The telecommunications requirements below-threshold will normally be considered for funding in the fiscal year that begins 22 months after the 1 September cut-off date.

It should be mentioned here that validation in itself does not provide funding or resources to support the requirement. According to OPNAVINST 2800.2, validation is a normal prerequisite to programming and budgeting actions. Only after successful programming and budgeting actions can

funding of validated telecommunications requirements occur. User requirements for which COMNAVTELCOM has O&M responsibility must be received not later than 31 July annually. This is to insure validation and inclusion with the initial Program Objective Memorandum (POM) input to CNO. If the POM input survives the CNO review process, it is submitted to SECNAV and SECDEF. At this point the individual requirement may have lost its identity, having been included under a broader project or program title.

SECDEF approval of the SECNAV POM leads to budget formulation, separate budget and congressional approval approximately 27 months later. This lead time cycle applies also to those requirements forwarded by submitting authorities for inclusion in the POM.

As mentioned earlier, the vehicle for submission of major and below-threshold telecommunications requirements is an SPP. As stated by OPNAVINST 2800.2, an SPP may be submitted at any time, but it is necessary to allow time for review and approval to be completed at all levels at least 60 days prior to the annual POM input to the consolidated telecommunications program. Minor requirements may be submitted at any time. Requirements data forms are also required for all telecommunications requirements. It should be mentioned here that in situations involving numerous activities or locations, new concepts, or a large number of circuits, a communications

plan may be required of the requiring activity or submitting authority. ADP is usually involved in these types of situations.

It was mentioned earlier, under section "B. Policy," that some telecommunications requirements are applicable to DCS and that COMNAVTELCOM will program and budget the costs for DCS switched networks. According to NAVTELCOMINST 2800.1B, Naval activities will submit requests for telecommunications service within the DCS to COMNAVTELCOM. (Appendix E is a copy NAVTELCOMINST 2800.1B, excluding Enclosures (1) and (2)). COMNAVTELCOM serves as the Navy Telecommunications Certification Office (TCO) for the lease or allocation of approved telecommunications services and facilities required by the Navy. The TCO submits Telecommunications Service Requests (TSRs) to DCA activities for telecommunications service ordering and other actions required to provide user services. The Navy submits message requests (commonly referred as Feeder TSRs) for telecommunications service. Submission of certain Feeder TSRs require prior validation in accordance with OPNAVINST 2800.2.

Feeder TSRs are divided into three categories of which two pertain to ADP (see Figures 1 and 3 in Appendix E). Category I requests are processed by the Navy TCO. Under Category I the requesting activity will submit Feeder TSRs to COMNAVTELCOM for action and to others for information.

Commander, Naval Data Automation Command (COMNAVDAC) will be included as an information addressee on all Category I Feeder TSRs involving data communications services. The other category pertaining to ADP is Category III where requests pertain to functions of the data automation commands. According to Category III procedures, the requesting activity under COMNAVDAC will submit Feeder TSRs to COMNAVDAC for action and to COMNAVTELCOM and others for information. Upon concurrence by COMNAVDAC the Feeder TSRs will be processed by COMNAVTELCOM. There are leadtimes associated with these Feeder TSRs and they must be complied with for submission by the TCO (see Enclosure (3) to Appendix E). Pricing information is provided in Enclosure (4) to Appendix E.

This section has presented the complex procedure/schedule for submitting telecommunications requirements plans. In addition, all aspects of the telecommunications requirements procedures as related to supporting ADP were included. Each level of requirements has different procedures and different validation/approval authorities (as will be discussed later).

F. SUBMITTING AUTHORITY

1. Telecommunications Support

According to OPNAVINST 2800.2, Submitting Authority (S/A) is defined as a major claimant or designee authorized to compile and submit Naval telecommunications

requirements. Submitting authorities will ensure that telecommunications requirements are identified during the appropriate programming and budgeting cycle. Commands and activities at all levels are responsible for recognizing communications deficiencies and for identifying and submitting new and revised telecommunications requirements to satisfy current and planned operations. The submitting authority will review, approve, or modify, and forward requirements for all activities for whom it is responsible. Below is a list of Navy submitting authorities. [Ref. 12]

Commander in Chief U.S. Naval Forces, Europe
Commander in Chief U.S. Atlantic Fleet
Commander, Naval Air Systems Command
Comptroller of the Navy
Chief of Naval Operations
Commander, Naval Civilian Personnel Command
Chief of Naval Reserve
Commander, Naval Data Automation Command
Commander, Naval Electronic Systems Command
Commander, Naval Facilities Engineering Command
Commandant, Marine Corps
Chief, Bureau of Medicine and Surgery
Commander, Naval Telecommunications Command
Commander, Naval Intelligence Command
Director of Naval Laboratories
Chief of Naval Material
Chief of Naval Research
Commander, Naval Security Group
Chief of Naval Education and Training
Oceanographer of the Navy
Chief of Office of Information
Commander in Chief U.S. Pacific Fleet
Commander, Naval Military Personnel Command
Commander, Military Sealift Command
Commander, Naval Sea Systems Command
Director of Strategic Systems Project Office (AM-1)
Commander, Naval Supply Systems Command

As stated by SECNAVINST 11120.1D and DOD Directive 4630.1, a Component Commander, Commander of a subordinate Unified/Specified Command or a Field Element/Activity of a DOD component, located within a Unified/Specified Command Area and having telecommunications requirements, will submit his requirements to the Commander of the Unified/Specified Command for validation. Navy Commands, not assigned to a Unified/Specified Commander, shall submit major and below-threshold telecommunications requirements to the CNO via the chain of command and COMNAVCOMM. According to OPNAVINST 2800.2, minor telecommunications requirements are submitted by a requiring activity.

2. ADP Support

Major, below-threshold and minor telecommunications requirements are considered a general type of telecommunications service and may be used for ADP. Another general type of telecommunications service used for ADP support is telephone service, which is also submitted by a requiring activity or public works. It should be mentioned here that telephone service is managed by the Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) and not COMNAVTELCOM. Specific types of telecommunications services used to support ADP are AUTODIN II, submitted by a requiring activity or submitting authority; and other ADP interconnects, submitted by a

requiring activity. Table 5-1 in Enclosure (5) to Appendix B identifies submitting authorities.

G. VALIDATION AUTHORITY

As stated by OPNAVINST 2800.2, validation is defined as the determination that a stated telecommunications requirement has been evaluated and found to be justified on the basis of need for fulfillment of an assigned mission, task or function. Validation does not constitute direction to fulfill the requirements; it is added authority for programming, budgeting, and implementation when resources become available. According to SECNAVINST 11120.1D and DOD Directive 4630.1, the Commander of the Unified/Specified Command will validate telecommunications requirements submitted to him by commands located within his Unified/Specified Command Area. The CNO will review and validate major and below-threshold telecommunications requirements for Navy Commands not assigned to a Unified/Specified Commander. On the authority of OPNAVINST 2800.2, COMNAVTELCOM validates minor telecommunications requirements, including changes to existing services and facilities. Telephone service, a general type of telecommunications service used for ADP support, is validated by COMNAVFACENGCOM. Specific types of telecommunications services used to support ADP are AUTODIN II, validated by COMNAVTELCOM; and other ADP interconnects,

validated by CNO or COMNAVTELCOM, and in some instances, Command and Control (C^2) Area Commanders and JCS. Table 5-1 in Enclosure (5) to Appendix B identifies validation authorities. Hence, the validation authority also plays an important role in the telecommunications requirements process. This authority allows the requirements process to continue into the programming and budgeting phase for action.

H. APPROVAL AUTHORITY

According to OPNAVINST 2800.2, approval is defined as concurrence that a stated requirement is recommended for validation and is acceptable for planning and implementation. Approval is implicit when a requirement is forwarded by a submitting authority. As stated by SECNAVINST 11120.1D and DOD Directive 4630.1, upon receipt of validated telecommunications requirements from Unified/Specified Commands, the JCS will review and recommend approval or disapproval of the requirements. SPPs are prepared by the appropriate agency. Then the requirements and supporting documentation are sent to the SECDEF for approval. Navy Commands not assigned to a Unified/Specified Commander have two approval authorities. One authority is CNO for telecommunications requirements below-the-threshold. In this case, CNO informs SECDEF and JCS of the approval. The other approval authority is

SECDEF for major telecommunications requirements. According to OPNAVINST 2800.2, CNO will approve below-threshold telecommunications requirements and CNO/SECDEF will approve major telecommunications requirements for the DON. Approval authority for minor telecommunications requirements is the submitting authority. Telephone service, a general type of telecommunications service for ADP support, is also approved by the submitting authority. Specific telecommunications requirements which support ADP are AUTODIN II, approved by the submitting authority; and other ADP interconnects, approved by the submitting authority and COMNAVDAC. Table 5-1 in Enclosure (5) to Appendix B identifies approval authorities. Therefore, the approval authority gives final word on concurrence for validation and on acceptability for planning/implementation.

I. SUMMARY

Telecommunications requirements of leased services in support of ADP reflect the largest growth and cost in telecommunications support. The current management environment of telecommunications in the Navy was just discussed in the areas of policy, levels of requirements, dollar thresholds, procedure/schedule for submitting plans, submitting authority, validation authority, and approval authority. The guidance provided in the various

instructions and directive that was just discussed ensure that telecommunications system planning, programming and budgeting to interconnect and support ADP planning and development are coordinated, timely and consistent with Federal, DOD and Navy policy. Telecommunications services in support of ADP facilities or terminals requiring telecommunications interconnect services fall into one of the levels of telecommunications requirements and dollar thresholds. The guidance for submitting telecommunications requirements in support of ADP (see Appendix 1 to Enclosure (5) to Appendix B) follows the same pattern as that discussed under the section "procedure/schedule for submitting plans." Early identification of telecommunications requirements by major claimants permit programming and budgeting action coinciding with the normal programming and budgeting cycle. According to OPNAVINST 2800.2, COMNAVDAC and COMNAVTELCOM will conduct a joint review of future telecommunications requirements in support of ADP in conjunction with the annual POM submissions (normally on or about mid-August). Telecommunications support and interface requirements will be defined by the requesting activity in coordination with COMNAVDAC and COMNAVTELCOM prior to the initiation of detailed design of ADP systems. The requiring activity will prepare an SPP for major and below-threshold telecommunications requirements and will forward the SPP with the Automated

Data System (ADS) plan. Minor telecommunications requirements may be incorporated in an SPP or submitted individually. Until implementation of AUTODIN II, the only reasonable means of satisfying ADP interconnect requirements are dedicated lines or dial-up telephone lines conditioned for data transmission. Government furnished, on-base or intrasite connections, and telephone dial-up service to the government exchange are obtained locally. Upon implementation, AUTODIN II will be the means to satisfy communications interconnects for ADP facilities. Exceptions to this will require operational and/or cost justification to obtain validation for dedicated communications service. The submitting, validation and approval authorities of telecommunications requirements in support of ADP are determined by the levels of requirements, dollar thresholds and type of service.

III. CURRENT MANAGEMENT ENVIRONMENT OF AUTOMATIC DATA PROCESSING

A. INTRODUCTION

The current management environment of ADP in the Navy is one of Life-Cycle Management (LCM). LCM is defined as the process for administering an AIS (a collection of functional user and ADP personnel, procedures, and equipment (including ADPE) which is designed, built, operated and maintained to collect, record, process, store, retrieve and display information over its whole life with emphasis on strengthening early decisions which shape AIS costs and utility. These early decisions must be based on full consideration of functional, ADP, and telecommunications requirements in order to produce an effective AIS. [Ref. 13]

The LCM process seeks to achieve certain objectives. These objectives are: to assure management accountability for the success or failure of AIS developments and identify the roles and responsibilities of functional, telecommunications and ADP managers throughout the life-cycle of an AIS; to establish a control mechanism to assure that an AIS is developed, evaluated and operated in an effective manner at the lowest total overall cost; to

provide visibility for all resource requirements of an AIS; and to promote cost effective standardization of AIS for use throughout the DOD and the DON. [Ref. 14] Relative to these objectives, guidance has been published in certain instructions and a directive. These documents are: SECNAVINST 5231.1A, "Life-Cycle Management of Automated Information Systems within the Department of the Navy," dated 20 November 1979; DOD Directive 7920.1, "Life-Cycle Management of Automated Information Systems (AIS)," dated 17 October 1978; DOD Instruction 7920.2, "Major Automated Information Systems Approval Process," dated 20 October 1978; and SECNAVINST 5230.6A, "Automatic Data Processing Approval Authority and Acquisition/Development Thresholds; delegation of," dated 31 August 1981. The management of AIIS covers such areas as policy, levels of AIS, ADP approval thresholds, procedure/schedule for submitting plans, submitting authority, validation authority and approval authority. These areas will be discussed in turn with regard to the management of AIS development in the Navy, emphasizing the telecommunications support of ADP.

B. POLICY

Policy guidance is given for all AIS plus specific guidance is given for major AIS. According to SECNAVINST 5231.1A, all AIS or revisions to such will be managed in accordance with SECNAVINST 5231.1A and DOD directive

7920.1. Appendix F is a copy of SECNAVINST 5231.1A. These AIS will have a Mission Element Need Statement (MENS) prepared in accordance with DOD Directive 7920.1 (see Enclosure (3) to Enclosure (2) to Appendix F). Also in accordance with DOD Directive 7920.1, specific tasks, decision points, and milestones shall be established within each life-cycle phase of an AIS in order that progress can be assessed and corrective action taken if time or cost slippages occur. As stated by SECNAVINST 5231.1A, the AIS will be reviewed and approved at each milestone at the appropriate level of authority as established in SECNAVINST 5230.6A. According to DOD Directive 7920.1, the review and approval mechanisms used during the life-cycle management of any AIS shall include coequal functional, telecommunications, and ADP participation and consultation to ensure full consideration of the economic, technological and operational factors involved. On the authority of SECNAVINST 5231.1A, each AIS will have a designated functional sponsor, who will validate requirements. Also as stated by SECNAVINST 5231.1A, standard AIS will be employed to the maximum feasible extent and will be developed and maintained centrally. Proposals for new or revised AIS will be justified on a cost/benefit basis and approved in accordance with SECNAVINST 5230.6A. Another important policy guide is that multi-functional AIS which involve multiple sponsors will have a primary sponsor

identified by mutual agreement and a Memorandum of Understanding (MOU).

The following policy guidance is for major AIS. SECNAVINST 5231.1A states that an AIS or its modifications at Levels 1, 2 or 3 Approval Thresholds, which are established by SENAVINST 5230.6A, will meet major AIS System Decision Paper (SDP) annex requirements outlined in DOD Instruction 7920.2 (see Enclosure (1) to Enclosure (3) to Appendix F). These particular AIS will be justified by an economic analysis prepared during the Definition/Design Phase of the life-cycle process in accordance with DOD Directive 7920.1. An AIS at Approval Threshold Levels 1, 2 or 3 will also be submitted as a definitive or consolidated issue in the Planning, Programming and Budgeting System (PPBS). Also in accordance with DOD Directive 7920.1, Congress shall be informed about major AIS acquisitions as they occur. Both sets of policy guidance provide for overall management of ADP in the Navy.

C. LEVELS OF AUTOMATED INFORMATION SYSTEMS

According to SECNAVINST 7920.1, the LCM concept, guidelines and documentation shall be applied to major automated information systems and, as appropriately adapted, employed for each AIS which is not designated as a major AIS. Thus, an AIS has two levels of requirements: major AIS and other AIS. As stated by DOD Directive

7920.1, an AIS or significant revision of an existing AIS meeting any one of a certain criteria shall be designated as a major AIS. The criteria for a major AIS is as follows: the AIS has anticipated costs in excess of $100,000,000 during the time span from the Mission Analysis/Project Initiation Phase through the extension and installation of the developed AIS to all operating sites; or the AIS has estimated costs in excess of $25,000,000 in any single year; or the AIS is designated as being of special interest by the Office of the Secretary of Defense (OSD). Estimates for measurement against these criteria shall be computed in constant dollars from the Mission Analysis/Project Initiation Phase year and shall consider functional costs, such as initiation investigation, requirements definition, test certification; telecommunications costs, such as dedicated communications circuits; and ADP costs. An AIS not meeting one of the criteria is in the category of other AIS. The levels of AIS determine what procedures are completed for LCM.

D. AUTOMATIC DATA PROCESSING APPROVAL THRESHOLDS

ADP costs are related to approval thresholds. According to SECNAVINST 5230.6A, there are ADP approval thresholds for each of the four levels of approval authority. The dollar thresholds and approval levels for the development of an AIS are as follows: costs exceeding

$25,000,000 are Approval Level 1; costs above $5,000,000 and up to $25,000,000 are Approval Level 2; costs above $500,000 and up to $5,000,000 are Approval Level 3; and costs up to $500,000 are Approval Level 4.

As stated by SECNAVINST 5230.6A, thresholds for AIS development are in terms of the total cost to develop and eventually install the AIS at all operating sites. Total costs pertain to all ADP costs and all non-ADP costs that directly relate to the development effort. In estimating the AIS development costs to be compared to the approval authority thresholds, certain considerations apply. One consideration is that all ADP and non-ADP costs to develop the AIS, expected to be incurred between approval of the MENS at Milestone 0 and the final installation at all operating sites (post - Milestone III), are to be combined. Another consideration is that the costs will include all one-time, in-house and ADP services contract costs for the study, definition, design, development, test and installation of the AIS. These costs include personnel, support, logistics, training, and other costs incurred in functional, ADP and telecommunications areas. Hardware and software maintenance costs incurred prior to Milestone III should also be included. A final consideration is that the costs will include all purchase or leased costs associated with ADPE acquisition/reutilization and proprietary software acquisition actions required in support of the AIS

development, installation and operations. If any individual ADP contract or equipment acquisition/reutilization action is part of an AIS development (including conversion or modification) and is approved as part of an AIS development effort, then it does not require separate ADP approval. If the total cost of an AIS development effort or the cost of any one of its component actions, such as ADPE acquisition/reutilization or acquisition of ADP services indicates that differing levels of approval authority are required, then the entire AIS development and all of its component actions must be approved at the highest indicated level of approval authority. It should be mentioned here that segmenting large ADP actions (including AIS, hardware or services acquisitions) into smaller segments solely to circumvent the approval thresholds is prohibited. Thus, costs for AIS development are very critical in determining the approval authority.

E. PROCEDURE/SCHEDULE FOR SUBMITTING PLANS

According to DOD Directive 7920.1, the procedures for submitting plans for review, validation and approval are tied to the life-cycle management phases. Overall, the life-cycle of an AIS is composed of the broad phases: Mission Analysis/Project Initiation; Concept Development; Definition/Design; System Development; and

Deployment/Operation (see Enclosure (2) to Enclosure (2) to Appendix F).

As stated by DOD Directive 7920.1, the purpose of the Mission Analysis/Project Initiation Phase is to identify a mission element need or set of functional requirements; validate that need; and recommend the exploration of alternative functional concepts to satisfy the need. This phase is completed when the MENS is approved at Milestone 0 by the appropriate approval authority. Authority is also given to explore and develop alternative concepts. According to SECNAVINST 5231.1A, it is mentioned here that COMNAVDAC is responsible for consolidating and maintaining a file of approved MENS. This is done in an effort to anticipate ADP resource requirements, to centrally identify and discourage functional systems development redundancy, and to facilitate ADP management.

In accordance with DOD Directive 7920.1, the purpose of the Concept Development Phase is to solicit and evaluate alternative methods to accomplish the function shown in the approved MENS and to recommend one or more feasible concepts for further exploration. A determination is made as to whether several alternative concepts should be demonstrated or the demonstration should be omitted. If it is decided that a demonstration is necessary, each functional concept selected for demonstration will be outlined to the point that the function is bounded and all

risks stated. Competitive demonstrations are intended to verify that the chosen concepts are sound, could perform in an operational environment, and provide a basis for final selection of a concept.

During the Concept Development Phase modeling and simulation of various concepts may be necessary to establish feasible functional baselines for further exploration. This phase is completed when the appropriate approval authority issues approval at Milestone 1 to demonstrate alternative concepts or to proceed directly to definition and design of an AIS based on a selected concept.

One important aspect applying to the Concept Development Phase is that the interface of ADP, telecommunications and other supporting elements will be recognized as an integral part of the AIS from the outset of planning and analysis efforts. Technical systems concepts, requirements, specifications and costs for communications assets will be identified and coordinated with COMNAVTELCOM during this phase and throughout the life-cycle of each AIS in accordance with DOD Directive 4630.1.

According to DOD Directive 7920.1, the purpose of the Definition/Design Phase is to define fully the functional requirements (system/subsystem specifications) and to design an operable AIS. This phase is completed when ADP

and telecommunications technical adequacy has been validated, and approval by the appropriate approval authority is issued at Milestone II to fully develop the system. Specific aspects that apply to this phase are that functional requirements and processes to be automated shall be documented and validated by an appropriate senior functional policy official before an AIS design is commenced and, as a goal, the overall AIS will be conceived and sized in a manner that will permit the development and evaluation of each module within nine to twelve months after detailed design of the AIS has been completed.

As stated by DOD Directive 7920.1, the purpose of the System Development Phase is to develop, integrate, test and evaluate the ADP and the total AIS. This phase is completed when appropriate functional officials approve the AIS as satisfying the mission need; and at Milestone III approval is issued by the appropriate approval authority to deploy and operate the approved AIS. An important aspect related to this phase is that all components of the AIS, such as functional, ADP, and telecommunications requirements, shall be managed as configured items.

According to DOD Directive 7920.1, the main purpose of the last phase, Deployment and Operation, is to implement the approved operational plan, including extension/installation at other sites. This last phase is also to continue approved operations; to budget adequately;

and to control all changes and maintain/modify the AIS during its remaining life using well defined configuration management procedures.

To supplement the LCM guidance of DOD Directive 7920.1, DOD Instruction 7920.2 establishes the review and decision process and procedures for major AIS. According to DOD Instruction 7920.2, this decision process is called the SDP process. Basically, the SDP process provides for appropriate policy level involvement in key decisions during the life-cycle of each major AIS. An SDP shall be prepared following the approval of the MENS to support the Navy and OSD reviews, coordination, and decisions before continuation of the AIS development. After review and concurrence by the appropriate senior policy official of the Navy (Assistant Secretary of the Navy (Financial Management) (ASN(FM))), the SDP shall be forwarded to the Assistant Secretary of Defense (Comptroller) (ASD(C)) for coordination of OSD review and decision. The OSD decision shall be recorded in the SDP and returned to the Navy for action. Then the SDP shall be maintained in an updated status by the project manager and resubmitted to the OSD at the next milestone.

As stated by DOD Instruction 7920.2, the approval process of a major AIS complements the PPBS. This occurs by the concentration on key issues related to AIS development progress and on effective OSD reviews at key

milestones. Major AIS decisions must fit into the affordability framework of the PPBS where OSD decisionmaking is keyed to the balancing of all programs within established DOD fiscal limits. Each major AIS shall be submitted as a definitive line in the POM and as separate ADP budget exhibits. The OSD initiatives and objectives for major AIS shall be reflected in the annual Consolidated Guidance Memorandum (CGM) by appropriate OSD officials. AIS review decisions shall be reflected in the Five Year Defense Program (FYDP) at the next scheduled update. This shall be accomplished either during the Program Objectives Memorandum/Program Decision Memorandum process or during the budget submission process, depending on when the OSD review is accomplished and the related decision is made. In cases where a Pom or budget submission to OSD deviates significantly from a previous AIS decision, the deviation plus cost/schedule performance impact, will be noted and explained. Each SDP affected by an approved program or budget decision shall be updated within 30 days, referencing the appropriate decision document.

According to DOD Instruction 7920.2, major AIS follow the life-cycle phases for decisions (see Enclosure (2) to (Enclosure (3) to Appendix F). The Milestone 0 decision occurs at the completion of the Mission Analysis/Project Initiation Phase. In this decision OSD approves the MENS

which permits the Navy to proceed in identifying alternative concepts to satisfy the functional need. At the completion of the Concept Development Phase, the Milestone 1 decision is made in which OSD considers the updated SDP to ascertain the adequacy of planning and determines whether to proceed to definition/design of an AIS based on a single concept. After the Definition/Design Phase is completed, OSD makes the Milestone II decision. In this decision, OSD reviews the updated SDP to ascertain the general progress of the project, the overall completeness and adequacy of the AIS design specifications, the thoroughness of the various planning documents, and the updated risk and economic analysis. Then OSD approval permits full scale development of the ADP system. At the Milestone III decision, which is at the completion of the System Development Phase, OSD reviews the updated SDP and determines whether the developed and tested AIS is ready to be deployed for operation at the operating site(s). After the Deployment/Operation Phase begins, OSD occasionally participates with the Navy in system effectiveness reviews. These reviews are to determine if the system effectively serves its users, to identify potential obsolescence, and to validate/certify continued need for the system. Overall the LCM process provides a good management procedure to follow an AIS through its entire life.

F. SUBMITTING AUTHORITY

The submitting authority for ADP actions is the requesting activity, who submits a MENS, and if applicable, an SDP up the chain of command for action and eventually approval or disapproval. The submitting authority must comply with all policy and procedures for the appropriate level of AIS.

G. VALIDATION AUTHORITY

According to SECNAVINST 5231.1A, the DON functional sponsors are responsible for validating requirements, which exceed Level 3 Approval Authority and are consistent with mission priorities within the sponsors' purview, and establishing priorities for those requirements. Functional sponsors will ensure that functional, ADP, and telecommunications plans are developed and maintained to reflect objectives, projected functional requirements, and anticipated operating environment. They will also obtain funding certification; advise COMNAVDAC when an AIS is expected to meet the criteria for a major AIS as defined in DOD Directive 7920.1. Below is a list of Navy functional sponsors. [Ref. 15]

SPONSOR	FUNCTIONS/SUBFUNCTIONS
ASSTSECNAV RES CMC	Scientific & Engineering Marine Corps Activities
General Counsel/ Judge Advocate General	Legal
OP-09B	Administration
OP-095	Navigation, Time and Frequency
OP-09R	Reserve Affairs
DONPIC	Five-Year Defense Plan Management
OP-090	Programming
OP-090	Budgeting
NAVCOMPT	Accounting
AUDITOR GENERAL of the NAVY	Auditing
OP-093	Medical Services
OP-094	Command and Control and Communications
OP-095	Oceanography
OP-098/CNR	Research, Development, Test and Evaluation
OP-008	Inspection
OP-009	Navy Internal Security
OP-01	Manpower, Personnel and Training
OP-04	Construction, Overhaul, Repair and Maintenance - Ships
OP-05	Construction, Overhaul, Repair and Maintenance - Aircraft
OP-04	Material
OP-04	Transportation
OP-04	Shore Facilities - Navy
OP-04	Safety
OP-06	Foreign Military Sales
OP-06	Strategic Planning
OP-009	Intelligence
OP-04	Base Operating Support

According to SECNAVINST 5231.1A, the DON functional sponsors will also appoint a functional manager for each AIS within their purview. It should be mentioned here that the functional manager will appoint a project manager, and a telecommunications manager (when required) for each AIS. The project manager will coordinate functional, technical,

and telecommunications activities. The telecommunications manager will be responsible for the design of telecommunications requirements; be responsible for test and implementation of telecommunications hardware and software which satisfy functional system requirements; develop a Telecommunications Subsystem Project Plan (TSPP or SPP) in accordance with SECNAVINST 11120.1D (Appendix D); participate in reviews as scheduled by the project manager; and be responsible for the preparation of telecommunications supporting documentation as required by SECNAVINST 11120.1D. Thus, the validation authority plays an important role in the LCM process.

H. APPROVAL AUTHORITY

As was stated earlier, the type and cost of an ADP action determines the approval authority level to which it should be submitted. Each approval authority shall ensure that appropiate review has been accomplished prior to submission to higher authority for ADP actions which require submission to a higher authority for approval. It should be mentioned here that upon review of the MENS, submitted in accordance with SECNAVINST 5231.1A, established higher level approval authorities may designate an ADP action as a special interest item. This preempts the established thresholds and requires that the action be processed by elevating it to the preempting authority's

approval level. Responsible approval authorities are to review and evaluate requests for approval of ADP actions and take appropriate steps to approve or disapprove those actions within delegated thresholds. Below is a list of Navy ADP approval authorities. [Ref. 16]

Level 1
Senior ADP Policy Official of the Department of the Navy

Level 2
Chief of Naval Operations*
Commandant of the Marine Corps
Director, DON ADP Management*

*COMNAVDAC is delegated CNO/Director, DONADPM Level 2 Approval Authority for actions not related to Naval Data Automation Command requirements.

*CNO (Op-942) will exercise Level 2 authority for actions internal to COMNAVDAC.

Level 3
Deputy Comptroller of the Navy
Chief of Naval Research
Chief of Naval Material
Commander in Chief U.S. Atlantic Fleet
Commander in Chief U.S. Pacific Fleet
Commander in Chief U.S. Naval Forces, Europe
Commander, Naval Data Automation Command
Chief of Naval Education and Training
Commander in Chief, Atlantic
Commander in Chief, Pacific
Commander, Naval Military Personnel Command

Level 4
Auditor General of the Navy
Chief, Bureau of Medicine and Surgery
Commander, Military Sealift Command
Commander, Naval Oceanography Command
Commander, Naval Telecommunications Command
Chief of Naval Reserve
Commander, Naval Intelligence Command
Commander, Naval Security Group Command

As stated by SECNAVINST 5231.1A, approval authorities will establish ADP executive committees for review of AIS actions within their authority; provide for effective assessment of the status and progress of each AIS; provide for approval of each AIS at stated decision points as detailed in DOD Directive 7920.1; take corrective action for each AIS when actual time and cost exceeds planning estimates by 15 percent or more at each major milestone as identified by DOD Directive 7920.1; and grant written waives to the provisions of SECNAVINST 5231.1A when any requirements are considered inappropriate. Approval authorities at Levels 2, 3 and 4 will furnish a copy of all approved MENS to COMNAVDAC for all AIS; submit he TSPP to COMNAVDAC who will initiate the telecommunications validation process; and provide for periodic command inspections or audits of AIS development and life-cycle management to ensure compliance with SECNAVINST 5231.1A.

According to SECNAVINST 5230.6A, approval authority established for Levels 3 and 4 may be further delegated. An information copy of all delegations will be provided to COMNAVDAC, who will forward them to CNO or Director, Department of the Navy Automatic Data Processing Management (DONADPM) as applicable. It should be mentioned here that under SECNAVINST 5230.6A, approval is not required for any ADP action where the annual aggregate total cost for purchase

or rental of ADPE, software or services does not exceed $10,000 (i.e., procure as local small purchase items). Thus, approval authorities are determined by the total cost of the AIS and their approval at stated milestones is an important part of the LCM process.

I. SUMMARY

Management of ADP in the Navy is accomplished through the five-phase process called life-cycle management. The Navy has implemented guidelines through instructions and a directive. Basically, the guidelines cover two levels of AIS. These levels of AIS are: major AIS and other AIS. A major AIS is defined as follows: costs exceed $100,000,000 over the life-cycle of the system, or estimated costs exceed $25,000,000 in a single year, or the AIS is designated as being of special interest to the OSD. ADP dollar thresholds are related to the four levels of approval authority. The thresholds are stated in terms of the total cost (ADP and non-ADP) directly related to the development of the system. According to SECNAVINST 5230.6A, ADP actions, such as the development of a new or revised AIS, follow certain approval procedures in the Navy. Actions requiring approval by the Senior ADP Policy Official (SPO) of the DON will be submitted to COMNAVDAC. Actions requiring approval above Level 3 and requiring expenditures over $1,000,000 must be validated and

certified by a functional sponsor, as stated by SECNAVINST 5231.1A, at the deputy CNO (DCNO) or equivalent level prior to or simultaneously with submission to ADP approval authorities. If a functional sponsor cannot be identified at the DCNO level, then the necessary requirements validation and certification of intent to program funds to support the action may be provided by the cognizant major claimant. The required validation and certification will be submitted to the appropriate ADP approval authority prior to the Milestone I review and approval of an ADP resource acquisition or an AIS project management plan. Prior to submitting an action for approval, the applicable requirements of the Government-wide ADP Sharing Program, reutilization, privacy, documentation standards, and the Commercial/Industrial Activities Program will be satisfied. For actions involving procurement of ADPE, ADPE maintenance, or commercially available software packages and requiring a Delegation of Procurement Authority (DPA) from General Services Administration (GSA), the requesting authority will prepare an Agency Procurement Request (APR) and, when required, the one-page summary for GSA to furnish to the House Government Operations Committee. Four copies of the APR and applicable documents will be transmitted directly to GSA by the appropriate approving authority. A copy of the APR and one-page summary will be sent to COMNAVDAC. A copy of the one-

page summary will be sent to the Director for Data Automation under the Assistant Secretary of Defense (Comptroller). COMNAVDAC will use the information copies received to assist as necessary should problems arise in GSA processing of the APR. The requesting authority will ensure compliance with all specific instructions contained in the DPA.

When telecommunications services are required in support of an ADP action, early identification of requirements and concurrent planning and approval efforts with COMNAVTELCOM are necessary. The ADP approval authority will not approve the ADP action until the required telecommunications certification has been given. In special cases, the ADP approval authority can give conditional approval of the ADP action pending telecommunications certification. All actions will be forwarded via the chain of command to the appropriate authority for approval or disapproval. Any authority in this chain of command has disapproval authority. Commands outside the chain of command of the approval authorities are to submit approval requests to COMNAVDAC and are to provide a copy of the request to the Director, DONADPM or the SPO as appropriate.

Basically, a major AIS shall be reviewed and approved at the OSD level, and an AIS that does not meet criteria for designation as a major AIS shall be reviewed and approved at the Navy level.

IV. PROBLEMS AND THEIR CAUSES

A. INTRODUCTION

The previous two chapters discussed the current management environment of telecommunications and the current management environment of ADP, respectively. The current management environment of both areas was discussed in terms of instructions and directives. The purpose of this chapter is to identify problems and their causes observed in telecommunications management from an ADP point of view. Specific topics to be discussed are management environment, dollar thresholds, major requirements, submission procedure and schedule, validation, funding, and approval. Each of these topics will be discussed in turn making a comparison between telecommunications management and ADP management, and identifying the problems and causes of the problems.

B. MANAGEMENT ENVIRONMENT

The current management environment of ADP and telecommunications are very different. The management environment of ADP is one of LCM. The life-cycle of an AIS is composed of the five broad phases: Mission Analysis/Project Initiation; Concept Development;

Definition/Design; System Development; and Deployment Operation. Users submit their requirements in a MENS, and if applicable, submit an SDP for major AIS. Decisions are made at the milestone in each phase before progressing to the next phase. The same approval authority makes the decisions at the different milestones.

The telecommunications management environment revolves around the telecommunications requirements process. This process includes the following steps: identification and submission of requirements, validation, programming and budgeting (approval), implementation, and operation. Users submit their requirements, develop an SPP and other supporting documents. Decisions are made at the submission, validation and approval steps. Different authorities make these decisions depending upon the level of requirement. (See Table 1.)

The problem with the telecommunications management in relation to ADP management is that it is confusing, redundant, costly, and time consuming. The problem is caused by the management procedures set forth in the requirements process. There are confusing terminology and submission paths, such as DCS path or not, major or below-threshold; redundant routing through the chain of command, such as the Program Element Sponsor submitting the SPP back to COMNAVTELCOM to submit as a PCR to CNO again.

Rerouting through the chain of command is also costly and time consuming.

C. DOLLAR THRESHOLDS

The dollar thresholds between ADP and telecommunications are different. As mentioned earlier in the thesis, the dollar thresholds for AIS development are as follows: costs exceeding $25,000,000 are Approval Level 1; costs above $5,000,000 and up to $25,000,000 are Approval Level 2; costs above $500,000 and up to $5,000,000 are Approval Level 3; and costs up to $500,000 are Approval Level 4.

The dollar thresholds for telecommunications are as follows: major requirements exceed $500,000 in investment cost or $200,000 in total annual leased cost; below-threshold requirements exceed $100,000, but cost less than $500,000 investment or $200,000 leased; and minor requirements cost $100,000 or less. (See Table 2.)

The problem with the telecommunications dollar thresholds from an ADP point of view is that they are too low. For example, while a Navy Command requires approval at Level 4 for an AIS development effort, the cost for the telecommunications requirements usually requires approval by SECDEF as a major requirement.

The cause of this problem lies in the figures for the different levels of requirements. These particular figures

were taken from DOD Directive 4630.1, dated 24 April 1968, and implemented by SECNAVINST 11120.1D, dated 19 November 1968. OPNAVINST 2800.2, dated 2 January 1980, also references the SECNAVINST 11120.1D for policy and procedures. As seen by the dates of the DOD Directive and the SECNAVINST, the dollar thresholds are antiquated compared to what they should be. Today costs are escalating due to inflation, to the elimination of the Telecommunications Package (TELPAK) [Ref. 17], to the division of the American Telephone and Telegraph (AT&T) Company, and to modern technology and its impact on telecommunications equipment. Due to the Computer Inquiry II Decision and escalating costs, COMNAVDAC is considering increasing the thresholds for ADP. If this happens, then something needs to be done with the dollar thresholds for telecommunications.

D. MAJOR REQUIREMENTS

In the previous section on dollar thresholds, it was mentioned that most ADP requests for telecommunications support require major telecommunications approval. The reader will recall that major telecommunications requirements exceed $500,000 in investment cost or $200,000 in total annual leased cost. In contrast, the criteria set forth for a major AIS is as follows:
life-cycle cost in excess of $100,000,000; or annual cost

in excess of $25,000,000; or special interest item of the OSD. (See Table 2.)

A possible problem that could exist here is that major telecommunications requirements costs are too low when compared to the actual costs of telecommunications support today. Again, the cause to this problem is the antiquated cost figures for major telecommunications requirements. Other causes of the problem were mentioned in the last section.

E. SUBMISSION PROCEDURE AND SCHEDULE

There are different submission vehicles for the ADP and telecommunications processes. The submission vehicles for requirements in ADP are the MENS for all AIS and the SDP for major AIS. The MENS are submitted at any time and approved at Milestone 0 of LCM. The remaining phases of LCM all relate to the requirements of the MENS. The SDP is submitted after the MENS to OSD and follows the same phases of LCM.

The basic submission vehicles for telecommunications requirements are the SPP and other supporting documents. According to OPNAVINST 2800.2, the SPP may be submitted at any time, but it is necessary to allow time for review and approval to be completed at all levels at least 60 days prior to the annual POM input to the consolidated telecommunications program. DOD Directive 4630.1 states

that 15 May is the deadline for major telecommunications requirements submission to SECDEF. SECNAVINST 11120.1D states that 1 September is the annual cut-off date for major and below-threshold requirements submission and 1 April is the deadline for SPP submission by Program Element Sponsors to COMNAVCOMM (now COMNAVTELCOM). (See Table 3.)

The problem with with telecommunications procedure and schedule is the conflicting submission dates given in the instructions. The cause of this problem is that the DOD Directive and SECNAVINST have not been revised to reflect the 1977 change in the start of the fiscal year from 1 July to 1 October.

F. VALIDATION

The validation process between ADP and telecommunications is quite different. As mentioned earlier in the chapter on ADP management, the DON functional sponsors for ADP validate requirements, which exceed Level 3 Approval Authority, and certify intent to program funds. This decision is based on full consideration of functional, ADP, and telecommunications requirements. The decision by the functional sponsors is made prior to or simultaneously with submission to ADP approval authorities. The functional sponsor is usually at the DCNO level, but may be a major claimant if a DCNO level sponsor cannot be found. The required validation and

certification will be submitted to the appropriate ADP approval authority prior to the Milestone I review and approval of an ADP resource acquisition or an AIS project management plan.

Validation for telecommunications, according to the OPNAVINST, is defined as the determination that a stated telecommunications requirement has been evaluated and found to be justified on the basis of need for fulfillment of an assigned mission, task or function. Validation here does not constitute direction to fulfill the requirements; it is added authority for programming, budgeting, and implementation when resources become available. The Commander of a Unified/Specified Command will validate Navy telecommunications requirements related to his Command Area. The CNO will review and validate major and below-threshold requirements for other Navy Commands. COMNAVTELCOM will review and validate minor threshold telecommunications requirements. In some instances, Command and Control Area Commanders and JCS, validate ADP interconnects other than AUTODIN II. (See Table 4.)

The problem then associated with the validation process is one of timing. Telecommunications validation indicates the need requested is valid. Then the programming and budgeting (approval) process indicates there is money to spend on the need at a specified time. This occurs just prior to implementation. Successful funding in the POM

then leads to implementation of the need requested. The ADP validation indicates the need requested is valid and funds are programmed for immediately. There is no waiting for another step in the process to get required funding.

The cause of the problem is the requirements process used in telecommunications management. Telecommunications management utilizes the POM process for their funding requirements as does ADP management. As stated earlier, the difference is when the actual programming and budgeting occur in the requirements submission process.

G. FUNDING

The previous section on validation leads to the problem of funding. As stated earlier, both telecommunications and ADP management procedures utilize the POM process for funding requirements. (See Table 4.) The problem with funding is also a matter of timing. Telecommunications funding occurs in the programming and budgeting (approval) phase of the telecommunications requirements process. ADP funding occurs in the validation process which is prior to or simultaneous with submission to ADP approval authorities. Again, the cause of the problem is the telecommunications requirements process used in telecommunications management.

H. APPROVAL

The approval process between ADP and telecommunications is very different. According to the ADP instructions, the approval authority is determined by the type and cost of an ADP action. There are four levels of approval authorities in the Navy. In the previous section on dollar thresholds, the cost and level of approval were discussed for development of an AIS.

Telecommunications instructions define approval as the concurrence that a stated requirement is recommended for validation and is acceptable for planning and implementation. Approval is implicit when a requirement is forwarded by a submitting authority. JCS will review and approve or disapprove validated telecommunications requirements submitted by the Unified/Specified Commanders. According to SECNAVINST 11120.1D and DOD Directive 4630.1, Navy Commands not assigned to a Unified/Specified Commander have two approval authorities. One authority is CNO for telecommunications requirements below-the-threshold. In this case, CNO informs SECDEF and JCS of the approval. The other approval authority is SECDEF for major telecommunications requirements. According to OPNAVINST 2800.2, CNO/SECDEF will approve major telecommunications requirements. Approval authority for minor telecommunications requirements is the submitting

authority. ADP interconnects other than AUTODIN II are approved by the submitting authority and COMNAVDAC. (See Table 5.)

One problem with the telecommunications approval process is that the approval authority for major telecommunications requirements is contradictory. This is caused by the instructions stating two different approval authorities. According to SECNAVINST 11120.1D and DOD Directive 4630.1, the SECDEF approves the major telecommunications requirements. But, according to OPNAVINST 2800.2, the major telecommunications requirements are approved by CNO/SECDEF. Another problem with the telecommunications approval process in relation to ADP is that it takes too long. ADP actions cannot be approved until the telecommunications requirements are certified. Only in special cases, can conditional approval be given to ADP actions pending telecommunications certification. The cause of the problem is the procedure that telecommunications requirements take to become validated and approved.

I. SUMMARY

This chapter has compared the management environments of ADP and telecommunications. A summary of the comparison is presented in Tables 1 thru 5 at the end of this chapter. This chapter has also emphasized that there are several

problems in the management of telecommunications in the Navy when compared to ADP. The problems were basically in the areas of management environment, dollar thresholds, major requirements, submission procedure and schedule, validation, funding, and approval. Several causes of the problems have been identified. The one major cause of most of the problems is the guidance set forth in the telecommunications instructions and directive.

TABLE 1. MANAGEMENT ENVIRONMENT

ADP (AIS)	TELCOMMS
LCM	Telecommunications Requirements Process
MENS/SDP	Requirement/SPP
Decisions at each milestone by same approval authority	Decisions at each step by different authority depending upon level of requirement
Procedures clearly defined	Procedures confusing and redundant

TABLE 2. DOLLAR THRESHOLDS/MAJOR REQUIREMENTS

ADP (AIS)	TELCOMMS
Major-over $100M entire life or over $25M in a single year or special interest (OSD)	Major-over $500K investment or over $200K annual lease (OSD)
Level 1-up to $100M development (ASN(FM))	
Level 2-up to $25M development (CNO)	Below Threshold-less than major, but more than $100K annual whether GFE, leased or both
Level 3-up to $5M development (Major Claimant)	
Level 4-up to $500K development (Major Claimant)	Minor-less than or equal to $100K GFE, leased both (COMNAVTELCOM)

TABLE 3. SUBMISSION PROCEDURE AND SCHEDULE

ADP (AIS)	TELCOMMS
MENS-all AIS submitted any time	Requirements-all communications requests
SDP-major AIS submitted after MENS	SDP-major/below-threshold submitted at any time
	OPNAVINST-review and approve at all levels 60 days prior to POM input
	DOD Directive-May 15 deadline to SECDEF for major requirements
	SECNAVINST-Sept 1 cut-off date for requirements submission

TABLE 4. VALIDATION/FUNDING

ADP (AIS)

Functional sponsor will validate requirements and certify intent to program funds. This decision is based on full consideration of functional, ADP and teleprocessing requirements.

Validation is made prior to or simultaneously with submission to ADP approval authorities.

TELCOMMS

The telecommunications requirements is justified on the basis of an assigned task or function. Validation does not constitute direction to fulfill the requirement. It gives added authority for programming, budgeting, and implementation when resources become available.

CNO - validates major and below-threshold requirements.

COMNAVTELCOM - validates minor requirements.

TABLE 5. APPROVAL

ADP (AIS)	TELCOMMS
Level 1-up to $100M development (ASN(FM))	Concurrence that stated requirement is recommended for validation and acceptable for planning and implementation
Level 2-up to $25M development (CNO)	
Level 3-up to $5M development (Major Claimant)	Approval Authorities:
Level 4-up to $500K development (Major Claimant)	SECDEF-major requirements CNO-below-threshold requirements S/A-minor requirements
Approved after telecommunications requirements certified	
	Approved at programming and budgeting step

V. RECOMMENDATIONS

A. INTRODUCTION

In the previous chapter, the problems of telecommunications management in the Navy were discussed and compared to ADP management. The problems were identified with the areas of management environment, dollar thresholds, major requirements, submission procedure and schedule, validation, funding, and approval. The causes of these problems were also discussed. In this final chapter, the author proposes to make general recommendations for resolving those problems. The recommended solutions to these problems will concentrate on the areas of requirements process, dollar thresholds, major requirements, submission procedure and schedule, and document change.

B. REQUIREMENTS PROCESS

The current telecommunications requirements process involves identification and submission of requirements, validation, planning and budgeting, and implementation. Problems are observed in the validation and planning and budgeting (approval) steps. During the validation step, the requirement is justified, but the intent to program

funds for the requirement is not certified until the planning and budgeting step. The author recommends that the validation step for telecommunications requirements includes both justification of the requirement and certification to program funds.

During the planning and budgeting or approval step, there is concurrence that a stated requirement is valid and is acceptable for planning and implementation. According to the telecommunications instructions and directive, there is confusion over the identification of the approval authority for major requirements. The author recommends that the DOD Directive, SECNAVINST and OPNAVINST be made consistent in identifying the appropriate approval authority for major telecommunications requirements.

Another problem related to this topic that needs clarification is the telecommunications requirements certification before an ADP action is given approval. The author contends that the approval of an AIS action, requiring telecommunications services, constitutes telecommunications certification. This should not be difficult since close coordination in the ADP world exists among the functional, telecommunications and ADP personnel and activities on a sustained life-cycle basis.

Another point to mention in this section is the difference between telecommunications management/SPP and ADP management/LCM. The SPP is required for each

requirement after validation (which precedes approval). According to OPNAVINST 2800.2, approval is implicit when a requirement is forwarded by a submitting authority. The author recommends that the SPP be submitted simultaneously with the telecommunications requirement.

C. DOLLAR THRESHOLDS

The dollar thresholds established for the various levels of telecommunications requirements (major, below-threshold, and minor) are outdated by fourteen years. DOD Directive 4630.1 established these thresholds, which were implemented by SECNAVINST 11120.1D, in 1968. OPNAVINST 2800.2 references the SECNAVINST and COMNAVTELCOMINST 2880.1B references the OPNAVINST. Thus, all the major instructions and directive refer to the telecommunications dollar thresholds previously cited in this thesis. The dollar thresholds should be changed to reflect current dollar figures for telecommunications services.

D. MAJOR REQUIREMENTS

In the previous section on dollar thresholds, the researcher referred to the various levels of telecommunications requirements. Major telecommunications requirements fall into one of these levels of requirements. In the previous section, the researcher also recommended

that the dollar thresholds of the various levels of telecommunications requirements be changed to reflect current dollar figures for telecommunications services. With this recommendation, the major telecommunications requirements will be changed.

E. SUBMISSION PROCEDURE AND SCHEDULE

When DOD Directive 4630.1, dated 1968, was developed, the fiscal year started on 1 July. Thus, the schedule for submitting requirements to SECDEF was established as 15 May. Since SECNAVINST 11120.1D implemented the DOD Directive, schedules established by that instruction also used the fiscal year starting on 1 July. Then in 1977 the fiscal year was changed so that it started on 1 October. OPNAVINST 2800.2 and COMNAVTELCOMINST 2880.1B both use the fiscal year starting 1 October. OPNAVINST 2800.2 also establishes the schedule for the review and approval of telecommunications requirements at all levels prior to the POM input. The researcher recommends that the DOD Directive and the SECNAVINST be updated to reflect the fiscal year starting on 1 October and that the new schedules be established inline with the PPBS cycle, especially the POM input.

F. DOCUMENT CHANGE

DOD Directive 4630.1 and SECNAVINST 11120.1D are both dated 1968. Since then there has been only two change transmittals to SECNAVINST 11120.1D. These two documents should be revised to include the previously mentioned recommendations of this chapter. If the revisions require too many changes, then the above documents should probably be cancelled and completely rewritten. The OPNAVINST and the COMNAVTELCOMINST should also be revised.

G. SUMMARY

Several improvements to the management of obtaining telecommunications in the Navy are suggested based on the current approach to ADP acquisition and management. The recommended changes are: to validate requirements and certify funds in the validation phase of the requirements process; to delete certification of telecommunications requirements needed for an AIS; to submit an SPP with the telecommunications requirements; to change dollar thresholds for major, below-threshold, and minor telecommunications requirements; to change submission schedules; and to make documentation revisions or cancellations.

This thesis was motivated by NAVDAC. NAVDAC had made a quick, overall review of the management of

telecommunications in the Navy with a notion that an ADP approach might improve the management process. Some areas appeared to be possible candidates providing for more effective and efficient telecommunications management procedures for acquiring telecommunications support for ADP systems. They included threshold levels of telecommunications services, the schedule for submission of plans, and the validation and approval processes. This thesis covered these areas and others. The recommendations should also help streamline the process of acquiring telecommunications support by expediting the approval process and possibly reducing user submission requirements.

APPENDIX A

DEFINITIONS AND ABBREVIATIONS

1. ACCESS LINE - A circuit connecting a subscriber to an automatic switching center.
2. ADP - Automatic Data Processing.
3. ADPE - Data processors, associated input-output devices, and auxiliary equipment using electronic circuitry to perform arithmetical and logical operations automatically by means of internally stored programmed instructions.
4. ADPS - ADPE linked together by communication and data transmission equipment to form an integrated system for the processing and conveyance of data.
5. ADS - Automated Data System.
6. AIS - Automated Information System.
7. APPROVAL - Concurrence that a stated requirement is recommended for validation and is acceptable for planning and implementation. Approval is implicit when a requirement is forwarded by a submitting authority.
8. APR - Agency Procurement Request.
9. ARS - Advanced Record System: Data communications service provided by GSA.
10. ASD(C) - Assistant Secretary of Defense (Comptroller).
11. ASN(FM) - Assistant Secretary of the Navy (Financial Management).

12. ASSTSECNAV RES - Assistant Secretary of the Navy (Research, Engineering and Systems).

13. AT&T - American Telephone and Telegraph.

14. AUTODIN - Automatic Digital Network of the Defense Communications System (DCS) for record communications.

15. AUTODIN II - A command user digital communications network for CONUS and certain European and Pacific subscribers available in the post FY 80 time frame in support of Automatic Data Processing (ADP) systems and networks. It will also provide the backbone trunking for AUTODIN I. AUTODIN II, a distributed communications network, uses packet-switching processors collocated with existing AUTODIN I switching centers. The system will accommodate interactive, query response, narrative and bulk data information exchange among ADP oriented facilities over a range of data rates with appropriate interface protocols.

16. BELOW-THRESHOLD TELECOMMUNICATIONS REQUIREMENTS - A need for new or increased capabilities costing less than the thresholds for major telecommunications requirements, but in excess of $100,000 annually (whether government furnished, leased or a combination of both).

17. CGM - Consolidated Guidance Memorandum.

18. CMC - Commandant of the Marine Corps.

19. CNO - Chief of Naval Operations.

20. CNR - Chief of Naval Research.

21. COMNAVCOMM - Commander, Naval Communications Command; now COMNAVTELCOM.

22. COMNAVDAC - Commander, Naval Data Automation Command.

23. COMNAVFACENGCOM - Commander, Naval Facilities Engineering Command.

24. COMNAVTELCOM - Commander, Naval Telecommunications Command.

25. CONUS - Continental United States.

26. DCA - Defense Communications Agency.

27. DCNO - Deputy Chief of Naval Operations.

28. DCS - Defense Communications System.

29. DDD - Direct Distance Dial.

30. DEDICATED CIRCUIT - A full period, permanent, interconnecting line between two or more users.

31. DOD - Department of Defense.

32. DON - Department of the Navy.

33. DONADPM - Department of the Navy Automatic Data Processing Management.

34. DONPIC - Department of the Navy Program Information Center.

35. DPA - Delegation of Procurement Authority.

36. FYDP - Five Year Defense Program.

37. GFE - Government Furnished Equipment.

38. GSA - General Services Administration.

39. INVESTMENT COST - The initial cost for establishment and acquisition of a facility. It is computed to include the cost of military construction or site preparation, procurement, and installation of equipment.

40. JCS - Joint Chiefs of Staff.

41. LCM - Life-Cycle Management.

42. LEASED LINE - A commercially provided circuit. Equipment or services also may be leased.

43. MAJOR TELECOMMUNICATIONS REQUIREMENTS - A telecommunications requirement exceeding $500,000 in investment cost for government-owned facilities, or exceeding $200,000 in total annual cost for leased facilities.

44. MENS - Mission Element Need Statement.

45. MINOR TELECOMMUNICATIONS REQUIREMENTS - A need for new or increased telecommunications capability for which the initial cost is $100,000 or less, annually, whether government-furnished, leased or a combination of both.

46. MOU - Memorandum of Understanding.

47. NAVDAC - Naval Data Automation Command.

48. NAVTELCOMINST - Naval Telecommunications Command Instruction.

49. NCS - National Communications System.

50. NTS - Naval Telecommunications System.

51. O&M - Operations and Maintenance.

52. OPNAVINST - Chief of Naval Operations Instruction.

53. OSD - Office of the Secretary of Defense.

54. PCR - Program Change Request.

55. PO - Program Objectives.

56. POM = Program Objective Memorandum.

57. PPBS - Planning, Programming and Budgeting System.

58. PROGRAM ELEMENT SPONSOR - The DCNO or Director of a Major Staff Office (DMSO) within OPNAV who is responsible for force composition, funding support, and programmed manpower for a specific program element.

59. REQUIRING ACTIVITY (R/A) - The O&M user that identifies and submits a telecommunications requirement to support mission, tasks and functions.

60. SDP - System Decision Paper.

61. SECDEF - Secretary of Defense.

62. SECNAV - Secretary of the Navy.

63. SECNAVINST - Secretary of the Navy Instruction.

64. SPO - Senior Policy Official.

65. SPP - Subsystem Project Plan: A plan that proposes modifications to existing systems or new facilities to provide telecommunications service. The plan will include the objectives of the planned subsystem project, comparative analysis of alternate means of satisfying the requirements, estimated costs of each alternative, recommended alternatives, recommended assignment for

procurement, installation, operation and maintenance responsibilities, desired implementation schedule, and programming and funding required for implementation. In addition, the plan will include the data specified in Appendix C.

66. SUBMITTING AUTHORITY (S/A) - A major claimant or designee authorized to compile and submit Naval telecommunications requirements.

67. TCO - Telecommunications Certification Office: The designated person or activity that certifies to DCA that a specified telecommunications service or facility is a bonafide requirement and is prepared to pay mutually acceptable costs involved in its fulfillment.

68. TELECOMMUNICATIONS - Any transmission, emission or reception of signs, signals, writing, images, and sounds or information of any nature by wire, radio, visual or other electromagnetic systems.

69. TELECOMMUNICATIONS REQUIREMENTS - The need for telecommunications service or equipment whether government-owned or leased.

70. TELPAK - Telecommunications Package.

71. TSPP - Telecommunications Subsystem Project Plan: (Also see SPP).

72. TSR - Telecommunications Service Request: A pro-forma request submitted to DCA or a DCA activity for the

implementation of certain requirements. Originated only by a specifically designated TCO.

73. URGENT TELECOMMUNICATIONS REQUIREMENT - A request for service for which the required date is less than the normal 24 months lead time. The term "Urgent" does not include actions resulting from inadequate planning.

74. VALIDATION - The determination that a stated telecommunications requirement has been evaluated and found to be justified on the basis of need for fulfillment of an assigned mission, task or function. Validation does not constitute direction to fulfill the requirement; it is added authority for programming, budgeting, and implementation when resources become available.

75. WATS - Wide Area Telecommunications Service.

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

IN REPLY REFER TO
OPNAVINST 2800.2
Op-941C12

2 JAN 1980

OPNAV INSTRUCTION 2800.2

From: Chief of Naval Operations

Subj: Naval Telecommunications System (NTS) operating requirements

Ref: (a) SECNAVINST 5400.13 of 24 Aug 71; Assignment and Distribution of Authority and Responsibility for the Administration of the Department of the Navy
(b) SECNAVINST 11120.1D of 19 Nov 68; Programming of Major Telecommunications Requirements
(c) SECNAVINST 4860.44B of 4 Apr 75; Commercial or Industrial Activities Programs

Encl: (1) Glossary
(2) Non-applicability
(3) Policy
(4) Requirements Process
(5) Identification and Submission of Future Naval Telecommunications Operating Requirements by the Requiring Activity
(6) Responsibilities and Identification of Submitting Authorities
(7) Implementation of Validated Telecommunications Operating Requirements

1. Purpose. This instruction provides policy and procedures for the identification, submission, validation and processing of operating requirements for telecommunications.

2. Cancellation. OPNAVINST 11120.5.

3. Definitions. Enclosure (1) contains a glossary of terms applicable to this instruction.

4. Scope and Applicability

a. Reference (a) assigns to the Chief of Naval Operations the responsibility for providing telecommunications services for Naval Forces.

b. Reference (b) establishes policy and procedures governing the programming of major telecommunications requirements.

c. Reference (c) establishes policy and procedures for the management of commercial or industrial activities programs which includes telephone systems.

d. This instruction applies throughout the Department of the Navy with regard to the processing of telecommunications requirements in support of operating forces based ashore and shore activities. Exceptions to the procedures specified herein are identified in enclosure (2). Telecommunications requirements include those for all new or increased circuit capabilities, whether government furnished or leased.

e. The basic telecommunications requirement is the need to transfer information, which in turn is translated into specific circuit requirements. Unique equipment to satisfy such requirements may be identified; however, equipment selection is the responsibility of the implementing authorities. Available equipment will be identified where appropriate under enclosure (7) to provide information for determining efficient and economic equipment acquisitions.

5. Background

a. The increasing high costs of telecommunications support, especially leased services, have resulted in high visibility of communications programs at all levels of government. This fact underscores the need for management awareness and improved life cycle documentation of telecommunications resources.

b. Development and planning for a responsive naval telecommunications system requires early identification and consideration of user requirements so that requisite programming to obtain necessary resources can be accomplished. The recognition, definition and submission of telecommunications requirements two or more years in advance of desired operational dates will permit system planning and programming to acquire necessary resources.

c. The intention of this instruction is to provide management assistance at all levels in identifying and obtaining the resources needed to satisfy telecommunications requirements.

6. Policy. The policy for processing telecommunications requirements is set forth in enclosure (3).

7. Responsibility and Authority

a. The Chief of Naval Operations (Op-941) will review, validate and approve major and below threshold telecommunications requirements for the Department of the Navy.

b. Submitting authorities, as identified in enclosure (6) are responsible for directing the implementation of this instruction, and will ensure that telecommunications requirements are identified during the appropriate programming and budgeting cycle.

c. The Commander, Naval Telecommunications Command will:

(1) Develop and promulgate Telecommunications Operating Requirements (TELCOR) documents for operating forces based ashore and shore activities.

(2) Analyze requirements and select the most cost-effective service and facilities, whether government owned or leased, for satisfying the requirement.

(3) Coordinate within the Department of the Navy, with other services, Department of Defense agencies, U.S. Government agencies, and industry, as required, to determine the most practical method of satisfying telecommunications requirements in accordance with existing policies.

(4) Validate minor telecommunications requirements, including changes to existing services and facilities.

(5) Plan, program and budget for the Naval Telecommunications System, (NTS) as assigned.

(6) Implement validated requirements, as assigned.

(7) Conduct biennial reviews of dedicated networks and circuits.

(8) Act as the predominant Department of the Navy point of contact with Headquarters DCA and DCA field activities with respect to the Defense Communications System.

d. The Chief of Naval Materiel (Commander, Naval Facilities Engineering Command) will review, approve and contract for administrative telephone services and facilities below the thresholds of a "new start" as described in reference (c). Administrative telephone services and facilities while not a part of the NTS, require extensive interfaces with that system. Responsibilities include:

(1) Validating requirements and approving changes to existing telephone systems and ownership.

(2) Establishing standards and procedures for the management of administrative telephone service.

(3) Executing contracts for telephone systems and services in accordance with current Navy Procurement directives.

(4) Reviewing currently published standards and procedures, including technical requirements for interface with AUTOVON, for operation and maintenance of administrative telephone facilities and services and to promulgate changes as necessary to ensure maintenance of quality levels equivalent to good commercial practices.

e. Commands and activities at all levels are responsible for recognizing communications deficiencies and for identifying and submitting new and revised telecommunications requirements to satisfy current and planned operations. Establishment of a base telecommunications coordinating group at the local level is encouraged to identify requirements to assure mutual support, and inclusion of the results in the base master plan.

8. Procedures. The procedures for processing Naval Telecommunications operating requirements are set forth in enclosures (4) through (7).

9. Action. Program adjustments resulting from this instruction will be made in subsequent Program Objective Memorandums (POMs), commencing with POM-83.

R. Y. KAUFMAN
By direction

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	FKR3A	(Air Engineering Center)
	FKR3C	(Air Test Center)
	FKR4A	(Missile Test Center)
	FKR4B	(Missile Range Facility)
	FKR5	(Avionics Facility)
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V4	(Marine Corps Air Facility)
V5	(Marine Corps Air Station)
V8	(Recruit Depot)
V12	(Marine Corps Development and Education Command)
V16	(Marine Corps Base)
V19	(Marine Corps Automated Service Center)
V23	(Logistics Base)
V25	(Marine Corps Air Ground Combat Center)

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GLOSSARY

Access Line - A circuit connecting a subscriber to an automatic switching center.

ADP - Automatic Data Processing.

ADPE - Data Processors, associated input-output devices, and auxiliary equipment using electronic circuitry to perform arithmetical and logical operations automatically by means of internally stored programmed instructions.

ADPS - ADPE linked together by communication and data transmission equipment to form an integrated system for the processing and conveyance of data.

Administrative Telephone Facilities and Services - Administrative telephone facilities and services include:

a. Automatic or Manual Systems providing a Shore (Field) Activity with common user, on-base telephone service connected to a commercial telephone system through trunk lines. The telephone facilities and services may be Government-owned and/or leased, including such items as instruments and associated apparatus, and outside cable plant.

b. Other local, on-base communications systems that may use portions of the local telephone system, such as public address systems, administrative intercom systems, fire reporting systems, and alarm systems.

c. Local, on-base telephone facilities that interconnect with AUTOVON (e.g., digit 8 level dialing).

d. Foreign exchange lines

e. Off-premise extensions

f. Wide Area Telecommunications Service (WATS)

g. Teletypewriter Exchange Service (TWX) and International and Domestic Teleprinter Exchange Service (TELEX). - Commercial services permitting teletypewriter communications on the same basis as telephone service, operating through central switchboards to stations within the same city or in other cities.

Approval - Concurrence that a stated requirement is recommended for validation and is acceptable for planning and implementation. Approval is implicit when a requirement is forwarded by a submitting authority.

ARPANET - Advance Research Project Agency Network; unsecured, packet switched, telecommunications data network that provides computer-computer and computer-terminal service.

ARS - Advanced Record System; data communications service provided by GSA.

ASC - Automatic Switching Center.

AUTODIN - Automatic Digital Network of the Defense Communications System (DCS) for record communications.

AUTODIN I - Automatic Digital Network; the world-wide, high speed, common user, record communications system of the DCS which provides user-to-user store and forward message switching service for the DOD and other authorized government agencies.

AUTODIN II - A common user digital communications network for CONUS and certain European and Pacific subscribers available in the post FY 80 time frame in support of Automated Data Processing (ADP) systems and networks. It will also provide the backbone trunking for AUTODIN I. AUTODIN II, a distributed communications net-

work, uses packet-switching processors collocated with existing AUTODIN I switching centers. The system will accommodate interactive, query response, narrative and bulk data information exchange among ADP oriented facilities over a range of data rates with appropriate interface protocols.

AUTODIN I TERMINAL - the equipment which provides user entry into the automatic digital networks ranging from 100 wpm teleprinters to computerized multi-media terminals and interfaced computers.

AUTOSEVOCOM - Automatic Secure Voice Communications Network; the common-user DCS secure voice network, supported principally by AUTOVON for transmission.

AUTOVON - Automatic Voice Network; the principal long-haul, common-user DCS unsecure voice communications network.

Avoidance Routing - Circuits routed so as to avoid critical junctions and known target areas.

Below-Threshold Telecommunications Requirement - A need for new or increased capabilities costing less than the thresholds for major telecommunications requirements as specified in reference (b), but in excess of $100,000 annually (whether government furnished, leased or a combination of both).

BESEP - Base Electronic System Engineering Plan. A BESEP translates the functional requirements of the Communications Operating Requirements (COR) into a statement of resource requirements, and it details the engineering plan for meeting the objectives of the project.

Circuit - An electronic path between two or more points.

Circuit Restoration - The process by which a communications circuit supplier provides a circuit path

between two user stations after disruption or loss of the existing circuit path, in accordance with preplanned procedures and priorities.

Communications Security (COMSEC) Equipment Requirements - Statement of the need for COMSEC equipment by specific quantity and type for a designated purpose.

DCA - Defense Communications Agency.

DCS - Defense Communications System.

DECCO - Defense Commercial Communications Office.

Dedicated Circuit - A full period, permanent, interconnecting line between two or more users.

Diverse Routing - Two or more circuits furnished over different physical routes. End-to-end diverse routing provides for separate physical routes having no common points user-to-user.

Dual Access (AUTODIN) - A method by which a subscriber, having only one set of terminal equipment, is provided access to two different ASCs by separate lines only one of which may be used at a time.

Dual Homing (AUTODIN) - A method by which a subscriber, having two sets of terminal equipment, is provided access to two different ASCs by separate lines both of which are used continuously.

E&I - Engineering and Installation.

ECC - Electronic Courier Circuit.

FTS - Federal Telecommunications System. Intercity telephone service provided by GSA within the CONUS.

Future Telecommunications Operating Requirements (Future -"TELCOR") A file of validated telecommunica-

tions operating requirements used as planning, programming and budgeting source data for the NTS.

FYDP - Five Year Defense Program.

GSA - General Services Administration.

Investment Cost - The initial cost for establishment and acquisition of a facility. It is computed to include the cost of military construction or site preparation, procurement, and installation of equipment.

Leased Line - A commercially provided circuit. Equipment or services also may be leased.

Major Telecommunications Requirement - A need for new or increased capabilities that are within the cost thresholds specified in reference (b).

Minor Telecommunications Requirements - A need for a new or increased telecommunications capability for which the initial cost is $100,000 or less, annually, whether government-furnished, leased or a combination of both.

Navy Trunk and Circuit Directory - A data file of NTS trunks and circuits for which resources are available as listed in part two of the TELCOR documentation system.

New Start - Initial requirement for activation of an original government or leased circuit.

NTS - Naval Telecommunications System - (Defined in enclosure (2) to OPNAVINST 5450.184C).

O&M - Operations and Maintenance.

Permanent Circuit - One provided and used in peace time and which normally continues to be used in wartime.

Program Element Sponsor - The DCNO or Director of a Major Staff Office (DMSO) within OPNAV who is responsible for force composition, funding

support, and programmed manpower for a specific program element.

RDT&E - Research, Development, Test and Evaluation.

Request for Service (RFS) - Message or letter (commonly referred as Feeder TSR) submitted in DCAC 310-130-1 format by the requiring activity to implement a validated and funded requirement in the case of new service, or to initiate implementation of routine actions not requiring prior validation.

Requiring Activity (R/A) - The O&M user that identifies and submits a telecommunications requirement to support mission, tasks and functions.

Split Homing (AUTOVON) - The connection of an AUTOVON terminal facility to more than one switching center by separate access lines, each having a separate number.

SPP - Subsystem Project Plan.

Submitting Authority (S/A) - A major claimant or designee authorized to compile and submit Naval telecommunications requirements.

TELCOR - Telecommunications Operating Requirement (described in NAVTELCOMINST 2800.1).

Telecommunications - Any transmission, emission or reception of signs, signals, writing, images, and sounds or information of any nature by wire, radio, visual or other electromagnetic systems.

Telecommunications Certifications Office (TCO) - The designated person or activity that certifies to DCA that a specified telecommunications service or facility is a bonafide requirement and is prepared to pay mutually acceptable costs involved in its fulfillment.

Telecommunications Operating Requirement (TELCOR) - An expressed need, explicitly related to a mission requirement, to transfer electrically

a given volume of information between two or more locations, within a specific time period and of a given quality and security classification.

Telecommunications Service Request (TSR)	A pro-forma request submitted to DCA or a DCA activity for the implementation of certain requirements in the format of DCAC 310-130-1. Originated only by a specifically designated TCO.
Temporary Circuit	One required for a limited period of time to satisfy a special requirement.
Urgent Telecommunications Requirement	A request for service for which the required date is less than the normal 24 months lead time. The term "Urgent" does not include actions resulting from inadequate planning.
Validation	The determination that a stated telecommunications requirement has been evaluated and found to be justified on the basis of need for fulfillment of an assigned mission, task or function. Validation does not constitute direction to fulfill the requirement; it is added authority for programming, budgeting, and implementation when resources become available.

NON-APPLICABILITY

This instruction does not apply to the submission and processing of telecommunications operating requirements in the following categories, except as required by reference (b):

a. Administrative telephone facilities and services.

b. Portable communications (base and tactical), and communications covered by the provisions of OPNAVINST 2300.45.

c. Radio frequency assignments (OPNAVINST 2400.7).

d. Cryptologic support for personnel and resources of COMSEC monitoring elements covered by the provisions of OPNAVINST S2501.10A.

e. Special Intelligence communications terminal and relay resources, covered by the provisions of OPNAVINST C2561.3.

f. Federal Telecommunications System (FTS) service, obtained in accordance with NAVTELCOMINST 2300.17A.

g. AUTOVON Private Automatic Branch Exchange or Central Exchange access (OPNAVINST 2305.13A). Requirements for fourwire AUTOVON subscriber access lines terminated at a telephone subset are covered by this instruction.

h. Office facsimile equipment covered by the provisions of SECNAVINST 10460.10. However, all interconnecting communications other than telephone and tactical facsimile requirements are covered by this instruction.

i. Other exclusions from the NTS are specified in enclosure (2) to OPNAVINST 5450.184C.

ENCLOSURE (2)

POLICY

1. General. Naval Telecommunications System requirements will be processed in accordance with this instruction.

a. Major Telecommunications Requirements, or other requirements as directed, which utilize the resources of or otherwise impact on the telecommunications systems, networks, or facilities within the area or jurisdiction of a commander of a unified or specified command will be coordinated with the commander concerned in accordance with reference (b). This coordination will be accomplished by the submitting authority prior to forwarding requirements as prescribed in this instruction.

b. Telecommunications requirements must be identified and costs estimated as early as possible in the planning and programming cycle and with the same completeness as the system requiring telecommunications support. Telecommunications required to support a weapons system, automated data system, command and control system, intelligence, logistics or administrative system must be specifically identified as an integral part of such system.

c. Telecommunications requirements in support of RDT&E will be submitted in accordance with this instruction. Programming and budgeting input is the responsibility of the submitting authority or project sponsor or manager.

d. Non-tactical telecommunications requirements normally will be satisfied using existing or planned DCS switching and transmission facilities. Dedicated facilities will be provided only when the DCS cannot provide the technical or critical operational capability required, or when dedicated facilities provide obvious cost advantages.

e. Future telecommunications requirements identified and documented by submission in accordance with enclosure (5), and not previously programmed and budgeted will be programmed and budgeted by the command with the O&M responsibility. At budget review time, monies programmed for leased NTS requirements will be transferred to COMNAVTELCOM to preclude extensive accounting and transfers of funds. Separate Marine Corps funding precludes wholesale

transfer of funds at budget review time and will continue to require the periodic transfer of funds. COMNAVTELCOM will program and budget all Navy validated access lines and Communication Service Industrial Fund (SIF) (backbone) costs for DCS switched networks. A requirement for DCS switched service with a desired operational date less than 24 months into the future, will be processed as an urgent operational requirement and must be fully justified and funds provided for a minimum of two years by the submitting authority. Future TELCORS, as described in NAVTELCOMINST 2800.1, will be provided routinely to submitting authorities and requiring activities. Validated requirements no longer needed must be identified for cancellation by the requiring activity or submitting authority. Requirements not validated or approved will be returned under separate cover to the submitting authority with the reasons for non-validation or disapproval.

f. Transfer of claimancy for consolidated naval telecommunications centers to COMNAVTELCOM is limited to those sites which are collocated with an existing COMNAVTELCOM managed activity.

g. Issues which cannot be resolved between submitting authorities and COMNAVTELCOM will be referred to CNO.

2. Dedicated Circuits.

a. Use will be restricted to requirements which cannot be satisfied by any other means.

b. A requirement, to qualify for dedicated service, must meet the test of one of the following criteria:

(1) Essential Characteristics

(a) Operational requirement (example: high-speed/interactive data requirements that cannot be adapted due to common user system data message length limitations or formal restrictions).

(b) Serviceability (example: equipment essential to satisfying the requirement is incompatible with common user switched networks).

(c) Responsiveness (example: realtime need for

the exchange of data requiring direct connectivity at all times).

(d) Other pertinent technical or qualitative factors (example: lack of ready access to a switched network because the remote location of the subscriber results in excessive circuit mileage costs).

(2) Cost. To qualify solely on the basis of cost, dedicated service must be significantly less costly than the use of:

(a) DCS Facilities
AUTODIN
AUTOVON
AUTOSEVOCOM

(b) Other Government Systems
Federal Telecommunications System (FTS)
Advanced Record System (ARS)

(c) Foreign/or Treaty Organization Systems

(d) Commercial
Wide Area Telecommunications Service (WATS)
Direct Distance Dial (DDD)

(3) Costing of DCS facilities for cost comparison purposes will be based on access line charges and will not include backbone costs. Costs for other leased services will be the prevailing costs or tariffs. Include in the plan the cost figures used.

e. A requirement that qualifies for dedicated service, will be satisfied by the most economical transmission system.

f. A primary or secondary backup requirement will share use of other existing facilities wherever possible.

g. Consolidation of dedicated facilities for shared use by similar activities will be accomplished whenever feasible.

h. Low volume, full period circuits will be replaced by dial-up circuits whenever appropriate.

i. Biennial Review of Dedicated Networks and Circuits.

(1) COMNAVTELCOM, in coordination with the submitting authority, will review dedicated networks and circuits every two years and determine whether such networks and circuits will be continued, or if the requirements can be fulfilled through use of DCS common user networks.

(2) The biennial reviews will be based on data in facilities reports submitted in accordance with OPNAVINST 2010.3D and TELCOR documents.

3. Orderwire and Coordination Circuits.

a. Voice orderwires and voice coordination circuits external to a facility will be used only when operation of a covered teletype circuit is impractical at either or both terminals (e.g., contractor operated facilities with inadequate security).

b. As specified in OPNAVINST C5510.93B, local orderwires will be covered to the greatest extent practicable, or operated as approved wirelines. Approval authority is vested in the activity commanding officer.

c. DCA Circular 310-50-6 prescribes policy and procedures for DCS teletype and voice orderwires.

4. Electronic Courier Circuits (ECC)

All requirements for ECCs will be submitted in accordance with OPNAVINST 2300.42A.

5. Continuity of Operations

a. The normal method of assuring continuity of operations is dual homing, dual access, split homing, or diverse routing, and the assignment of an appropriate restoration priority by the National Communications System Manager.

b. Requirements for redundant (backup) telecommunications will be reviewed for validation on a case-by-case basis. To qualify the primary circuit must have a restoration priority level of one or two. Section IV of ACP 121 U.S. SUPP 1(E) and NWP-4 provide guidance regarding restora-

tion priorities. Such requirements must be fully justified citing operational necessity and deficiencies which have been experienced or are anticipated with primary facilities.

(1) Within the continental U.S., Alaska, Puerto Rico, and Hawaii, redundant facilities will be limited to support of operating forces based ashore.

(2) In overseas areas the need for redundancy may be conditioned by the technical adequacy of host nation systems, governmental and labor instability, or the need to have specified telecommunications support wholly under control of U.S. Forces.

(3) Command and control or other mission activities requiring a higher level of survivability and reliability than that provided by a single system, must justify the requirement based upon the mission and location of the activity (the requested degree of communications survivability must be consistent with that of the operational facility being served).

6. Non-DOD U.S. Government Activities. Requests for telecommunications service with or in support of such activities will be forwarded to CNO via the submitting authority and COMNAVTELCOM.

7. Requirements Involving Non-U.S. Activities

a. Navy activities originating such requests will forward them to CNO via the submitting authority and COMNAVTELCOM. ACP 121 - US SUPP-1(E) provides guidance.

b. Normally, requests of this nature must be approved by the Joint Chiefs of Staff and the Secretary of Defense prior to validation.

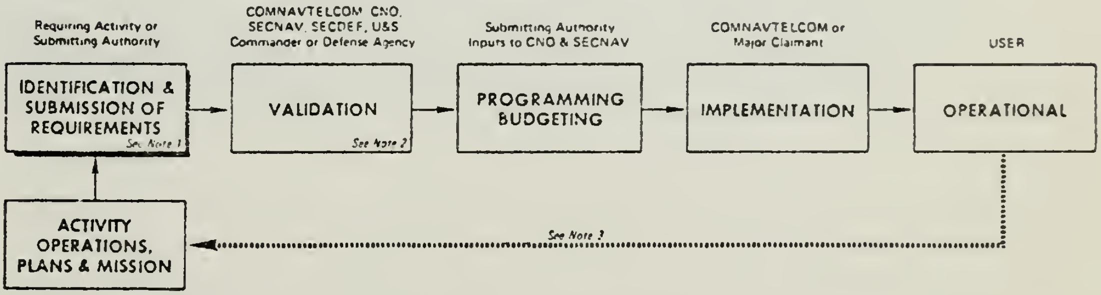
8. Requirements Involving Service for DOD Contractor Activities

In all cases, such requests will be forwarded to CNO for action via the submitting authority and COMNAVTELCOM.

THE TELECOMMUNICATIONS REQUIREMENTS PROCESS

1. The requirements process begins with the identification of telecommunication needs based upon the mission of the activity and the operational planning the activity must support (see Figure 4-1). The user (requiring activity) identifies its telecommunicatons support needs and forwards these requirements through the chain of command to the submitting authority.

Figure 4-1 The Telecommunications Requirements Process Flow Diagram


Requiring Activity or Submitting Authority
COMNAVTELCOM CNO. SECNAV. SECDEF. U&S Commander or Defense Agency
Submitting Authority Inputs to CNO & SECNAV
COMNAVTELCOM or Major Claimant
USER
IDENTIFICATION & SUBMISSION OF REQUIREMENTS
See Note 1
VALIDATION
See Note 2
PROGRAMMING BUDGETING
IMPLEMENTATION
OPERATIONAL
ACTIVITY OPERATIONS, PLANS & MISSION
See Note 3

Notes:

1. Requirements may be originated at the operating level/command, or result from centralized planning by COMNAVTELCOM *(e.g., AUTODIN, Comm. center consolidations)* or CNO platform sponsors, who in turn task CHNAVMAT, SYSCOMS or COMNAVTELCOM.
2. To CNO/SECNAV/SECDEF for major or below-threshold telecommunications requirements.
3. Feedback causing new or changed requirements.

2. The submitting authority reviews and comments upon the requirements and forwards them to COMNAVTELCOM.

3. COMNAVTELCOM evaluates and validates minor telecommunications requirements and forwards below threshold and major telecommunications requirements to CNO with appropriate recommendations. Validation in itself does not provide funding or resources to support the requirement. It is a normal prerequisite to programming and budgeting actions.

4. Funding of validated telecommunicatons requirements occurs only after successful programming and budgeting actions. User requirements for which COMNAVTELCOM has O & M responsibility must be received by not later than 31 July annually in order to be validated, and included with the initial Program Objective Memorandum (POM) input to CNO. If the POM input survives the CNO review process, it is submitted to SECNAV, thence to SECDEF. (At this point the individual requirement may have lost its identity, having been included under a broader project or program title.) SECDEF approval of the SECNAV POM leads to budget formulation, separate budget and congressional approval approximately 27 months later. This lead time cycle applies also to those requirements forwarded by submitting authorities for inclusion in the POM.

IDENTIFICATION AND SUBMISSION OF FUTURE NAVAL TELECOMMUNICATIONS SYSTEM OPERATING REQUIREMENTS BY THE REQUIRING ACTIVITY (R/A)

1. Identifying Requirements

a. The requiring activity (R/A) identifies its future telecommunications requirements from assigned mission, tasks and functions. This is the initial step in the requirements process. In some instances, submitting authorities, CMC, COMNAVTELCOM, CHNAVMAT, or a SYSCOM, may be centrally planning a system or project, in which case the requiring activity will receive feedback and be advised of action required. Table 5-1 of this enclosure, provides an aid in identifying and submitting requirements.

b. Various categories of requirements, which may be major, below threshold or minor, as defined in enclosure (1), are described below:

(1) New NTS requirements whether DCS or tactical, leased or government owned, and related COMSEC requirements.

(2) Routine actions affecting DCS services such as discontinuances, extensions, circuit reroutes, leased equipment relocations, alternate routing (except AUTODIN, which is submitted IAW DCA OPLAN 1-75), changes to operating hours, and data base changes.

(3) Fleet Portable Communications. Requirements are under the authority of the FLTCINCS. Refer to OPNAVINST C9570.2 for guidance. These requirements are not applicable to the NTS.

(4) Communications for Internal Security, Industrial Control and Passive Defense. OPNAVINST 2300.45 prescribes the procedures for satisfying these requirements. Commanders having primary support responsibility for operating forces based ashore and shore activities are authorized to approve and fund requirements for internal security, industrial control and emergency and passive defense. These requirements are not applicable to the NTS.

(5) Office Facsimile Transmission Service. SECNAVINST 10460.10 provides guidance in obtaining equipment for this type of office facsimile service. Interconnect requirements, satisfied by other than the administrative telephone systems, require processing in accordance with this instruction, e.g., dedicated lines or AUTODIN. Tactical facsimile requirements are a part of the NTS and are covered by this instruction.

(6) Communications Support Provided to the Navy by other DOD activities (e.g., Army or Air Force). Requirements of this type normally are identified and funded at the local level. Message service and administrative telephone support are generally the types of requirements that are satisfied. Responsibilities and funding are covered by a locally prepared interservice support agreement or similar document. SECNAVINST 7020.4C provides guidance regarding financial administration of interdepartmental support agreements with the Army and Air Force.

(7) FTS and ARS. These services are managed by the General Services Administration, and provide government-wide service similar to AUTOVON and AUTODIN. Within the Navy, use of FTS and ARS is normally limited to activities not located on military installations. FTS service is obtained in accordance with COMNAVTELCOMINST 2300.17A. Requests for ARS service will be submitted to COMNAVTELCOM.

(8) Armed Forces Radio and Television Service (AFRTS). SECNAVINST 1700.10B provides guidance. This instruction is applicable only to assistance in obtaining transmission circuits.

(9) Banking Facilities Serving Navy and Marine Corps Installations. SECNAVINST 5381.1F authorizes communications support to banking facilities and provides guidance for providing such service.

(10) Communications Support of Morale, Welfare and Recreation Programs and Activities. DOD Directive 1330.2 of 17 March 78 contains authorization and funding guidance for providing communications support to morale, welfare and recreation activities.

(11) Communications Security Requirements. The following is a listing of points to consider in establishing COMSEC system and equipment requirements. OPNAVINST C5510.93B provides guidance on control of compromising emanations.

(a) General Descriptive Data

1 Type and format of information

2 Highest classification of information

3 Special category information

4 Perishability of information

5 Netting requirements in terms of broadcast, point-to-point, multiholder or conferencing.

(b) Transmission Security

1 Requirement for internal plain text electrical transmission circuits.

2 Authentication requirements

3 Clearance and access levels of all system subscribers

4 Any special protective measures required to protect the transmission from exploitation

(c) COMSEC Equipment Requirements

1 Type, nomenclature, quantity and availability of COMSEC equipment

2 Speed of information transfer and type of operation (manual or automatic, on-line or off-line)

(d) Physical Security

1 Physical environments in which system will be installed (friendly or hostile, aircraft, private residences, offices, communication centers, unmanned sites, as examples)

2 Physical protective measures required for each type of environment

3 Protective measures required against forceful or surreptitious entry, and clandestine listening/recording devices at terminal locations

4 Special protective measures (e.g., physical, accounting, personnel authorization) required for classified crypto material.

(e) Emission Security

1 Evaluate possible problem areas, based on factors such as physical location, type of equipment (including terminal electronic subsystems), amount and type of classified information processed.

2 Determine applicable TEMPEST guidance documents, and sources of technical assistance in avoiding TEMPEST problem.

(f) Use of COMSEC material by U.S. contractors is covered in OPNAVINST 2221.5.

c. Special Considerations

(1) Requirements for four-wire access lines terminated at an AUTOVON subscriber subset or narrowband AUTOSEVOCOM terminal must be approved by the area unified commander, or CNO for CONUS support activities, and comply with Section XII, ACP 121 U.S. SUPP-1(E).

(2) AUTODIN I store and forward message switching in addition to providing general message and card transmission, also is capable of providing the services described below, which must be considered as alternatives to dedicated service:

(a) Query/Response - Service designed primarily to satisfy remote job entry requirements. This service allows terminals and host to use an abbreviated header format for information exchange via AUTODIN I ASCs. DCAC 310-D70-60 refers.

(b) Guaranteed Sequential Delivery of Bulk Data - Within the CONUS only, this service provides bulk transmission of data to a single destination regardless of the number of segments to a message. A query/response capability must be available at the host system to initiate the connection to the switching environment.

(c) Facsimile - Provides terminal-to-terminal transmission of facsimile data via AUTODIN ASCs, requires special terminal equipment and minimum transmission rate of 1200 bits per second (BPS) with 2400 BPS preferred. With appropriate interface, facsimile equipment can share an existing access line with an AUTODIN Mode I terminal.

(3) ARPANET - A packet-switched, telecommunications network originally designed to service the scientific community in support of DOD research and development. The network is managed by DCA, and is limited to the CONUS and Hawaii. It provides computer to computer and terminal to computer data service, similar to AUTODIN II, as contrasted with record communications.

2. Submitting Requirements

a. Major and below-threshold telecommunications requirements are prepared and forwarded via the submitting authority and COMNAVTELCOM in accordance with reference (b). The vehicle for the submission of such requirements is a Subsystem Project Plan (SPP). In addition, requirements data forms will be enclosed for each recommended circuit as prescribed in Table 5-2 of this enclosure. An SPP may be submitted at any time, but it is necessary to allow time for review and approval to be completed at all levels at least 60 days prior to the annual POM input to the consolidated telecommunications program.

b. Minor telecommunications requirements are prepared and submitted via the submitting authority to COMNAVTELCOM. Requirements data forms will be enclosed for each proposed circuit as outlined in Table 5-2 of this enclosure. To insure understanding of the requirement, the forwarding letter or statement with the requirements forms will provide: the anticipated traffic volume or use; the highest security classification of information to be transferred; feasibility or urgency of the information; an explanation for dedicated service (i.e., reason DCS switched networks cannot be used), if applicable; a description of any pecul-

iar site or system features. Minor requirements may be submitted at any time. A communications plan may be required of the requiring activity or submitting authority in situations involving numerous activities or locations, new concepts, or a large number of circuits.

c. Urgent telecommunications requirements are submitted via the submitting authority as the need arises. Message submissions must include the essential information required in the requirements data forms (Table 5-2). Letter submissions will have the requirements data forms enclosed. The submitting authority must identify funds, or an equivalent trade-off, for leased costs and any industrial fund charges. The availability of other required resources (equipment and personnel) must also be indicated.

d. Requirements that are temporary or in support of exercises will be submitted in accordance with enclosure (7) for immediate implementation, if funded. Unfunded requirements will be submitted as urgent telecommunications requirements.

e. Telecommunications requirements in support of ADP reflect the largest growth and cost in telecommunications support. Until implementation of AUTODIN II packet switching, the only practical means of satisfying ADP interconnect requirements are dedicated lines or dial-up telephone lines conditioned for data transmission.

(1) Guidance for the submission of ADP requirements is provided in Appendix 1 to this enclosure.

(2) Government furnished, on-base or intrasite connections and telephone dial-up service to the government exchange are obtained locally.

f. Requests for new or replacement government equipment needed to support telecommunications requirements validated under this instruction will be forwarded in accordance with enclosure (7). Such requests will reference correspondence approving or validating the basic requirement. Exceptions are centrally managed projects or planning that have been assigned to COMNAVTELCOM or COMNAVELEXSYSCOM.

g. To determine total resource requirements, the requiring activity, submitting authority or higher headquarters may fund and request a site survey and a preliminary BESEP be provided by COMNAVELEXSYSCOM. OPNAVINST 1000.16 provides guidance on manpower.

CODING INSTRUCTIONS FOR REQUIREMENTS DATA FORMS

FORM ONE (TABLE 5-2)

FIELD (AND COLUMNS) DATA ENTRY

1. (Column 1-2) Submitting Authority (S/A) code. Enter appropriate code from Table 6-1 of enclosure (6).

2. (Column 4-6) Item number. Numerical sequence of item submitted for current fiscal year. S/A assign and enter. Start new series beginning each fiscal year.

3. (Column 8-14) Validation number. Do not enter. COMNAVTELCOM provides. Column 8 will be "T" for CNTC validation or "C" for CNO validation. The validation number (column 9-11) will be sequential for the current fiscal year (column 13-14).

4. (Column 16-23) Geographic point "from." Enter this and fields 5, 6, and 7 in accordance with DCAC 310-65-1. This is the user location, normally identified by the R/A.

5. (Column 25-26) State or country "from" point.

6. (Column 28-35) Geographic point "to."

7. (Column 37-38) State or country of "to" point.

8. (Column 40-43) Required operational date. R/A assign. Column 40 is the numerical quarter. Enter "Q" in column 41. In columns 42 and 43 indicate last two digits of the fiscal year.

9. (Column 45-49) Type of service. R/A assign general type of service required from the following: CARD (DATA), TAPE (DATA), COMP (direct computer access), VOICE, TTY (teletype), FAX (facsimile), OTHER. If

"other" is used, it is to be explained in the narrative remarks card.

10. (Column 51-54) Type of operation. R/A assign general type of operation required from the following: FDUX (full duplex), HDUX (half duplex), R/O (receive only), S/O (send only), MUXD (multiplexed data full duplex), MUXV (multiplexed voice full duplex), OTHR (other). The latter is to be explained in the narrative remarks card.

11. (Column 56-60) Modulation or data rate. R/A assign rate required, right justified. Columns 59 and 60 are used for B (baud/bits), KB (kilobits), or MB (megabits). Examples: 75B, 2.4KB, 16KB, 2MB. The entry "AV" is used for analog voice.

12. (Column 62-66) Crypto. R/A enter crypto equipment desired to be used in columns 62-65. In column 66 enter crypto equipment availability: "A" means available, "R" means required.

13. (Column 68-73) Priority. R/A assign. This will provide the relative priority of the line item requirement in relation to other requirements. This data entry is obtained from the Force Activity Designator (FAD) delineated by OPNAVINST 4614.1. The first three columns (68-70) will be used for the FAD addressed by the above instruction. Column 71 is a hyphen. The last two columns (72-73) will be the Urgency of Need Designator (UND). Assignment is to be based on Table (1) "Criteria for Use by All," of Enclosure (2) to OPNAVINST 4614.1. This code will be used to indicate the relative urgency of the requirement for use in programming/budgeting.

14. (Column 75-80) Annual Recurring Leased Costs. R/A or S/A enter estimated costs for recurring leased services when S/A is responsible for funding. Enter in thousands of dollars with nearest 100 preceded by a decimal, e.g., $102,300 per annum would be entered 102.3, right justified.

- NOTE -

Columns 3, 7, 15, 24, 27, 36, 39, 44, 50, 55, 61, 67, and 74 are reserved for computer control purposes and are not to be used.

FORMS 2 THROUGH 4 (TABLE 5-2)

Entries in fields 1 through 3 are common and will be completed on remarks form number 2 (plus form 3 and 4 if used) as outlined for form number 1. The entry of an asterisk (*) in column 15 of each remarks form is required. The remaining columns (16-80) are free flowing narrative remarks information identical for forms 2 through 4.

The first entries in form 2 (starting with column 16) will be the identification of the requiring activity and the corresponding UIC for the activity in accordance with Navy Comptroller Manual, Vol. 2 (chapter 5). Abbreviations or acronyms are acceptable only if they are common knowledge. The following information at a minimum is desired in the remarks column: approved plan, project or tasking being supported (cite authority and reference); state if additional manpwer (quantity) and training required; state if E&I funds are available or programmed; indicate whether government furnished equipment is available or must be procured or leased; justification for the service and the impact if requested service is not provided.

Table 5-1 GUIDE TO IDENTIFYING & SUBMITTING REQUIREMENTS

TYPE OF SERVICE	WHO SUBMITS	WHO		WHO FUNDS	HOW OBTAINED	SPECIAL CONSIDERATIONS (See Notes 2 and 3)	REFERENCES
		APPROVES	VALIDATES (See Note 1)				
A. General Category							
1. Admin. Telephone Facilities and Services	R/A or PWC	S/A	COMNAVFACENGCOM	S/A or NAVFACENGCOM	IAW NAVFACINSTS	Copies of requests for leased lines or WATS for ADP support will be provided to NAVTELCOM and NAVDAC	NAVMATINST 2305.5B NAVFACINST 2300.2B
2. Below threshold Telecommunications Requirements	R/A or S/A	S/A	CND	S/A	SPP		SECNAVINST 11120.10
3. Major Telecommunications Requirement	R/A or S/A	S/A SECDEF	CND	S/A	SPP		SECNAVINST 11120.10
4. Minor Telecommunications Requirement	R/A	S/A	COMNAVTELCOM	S/A	IAW Enclosure (5)	SPP required in some cases	
5. Routine OCS Action	R/A	Navy TCO (COMNAVTELCOM) or Area TCO (CINCPACFLT or CINCUSNAVEUR)	N/A	N/A	RFS (Feeder TSR) IAW Enclosure (7)		OCA Circular 310 130-1 NAVTELCOMINST 2880.1
6. Urgent Telecommunications Requirements	R/A	S/A	COMNAVTELCOM		IAW Enclosure (5)		NAVTELCOMINST 2880.1

NOTES.

1. Unified (Area) Commanders and Defense Agencies may also validate requirements
2. Use of government furnished equipment in conjunction with foreign leases normally requires host nation approval of such equipment before leases can be consummated.
3. Circuit requirements with demanding technical parameters necessitate determination that domestic and foreign carrier transmission facilities as well as on base cable or other facilities are adequate in number and quality to meet operational dates

Table 5-1 (cont.) GUIDE TO IDENTIFYING & SUBMITTING REQUIREMENTS

TYPE OF SERVICE	WHO SUBMITS	WHO APPROVES	WHO VALIDATES (See Note 1)	WHO FUNDS	HOW OBTAINED	SPECIAL CONSIDERATIONS (See Notes 2 and 3)	REFERENCES
B. Specific Category							
1. ADP Interconnects (other than AUTODIN II)	R/A	S/A COMNAVDAC	CNO or COMNAVTELCOM. C^2 Area Commander and JCS in some instances.	S/A	IAW Enclosure (5) or references	May be centrally planned. Area dial up and on-base lines are obtained locally. SPP may be required. See AUTODIN II.	OPNAVINST 5231.1 SECNAVINST 5236.1 and 5236.3, and JCS Pub. 19.
2. AFRTS Support	R/A	Navy Broadcast Service	Navy Broadcast Service or PA	S/A(PA)	RFS (Feeder TSR)		SECNAVINST 1700.10B
3. ARPANET	R/A	S/A DCA	COMNAVTELCOM	S/A	IAW Enclosure (5)	Unclassified Info only	
4. Approved Wirelines	R/A	Commanding Officer	N/A	N/A	Locally provided		OPNAVINST C5510.93B
5. ARS(GSA)	R/A	S/A	COMNAVTELCOM	S/A	Request to COMNAVTELCOM	Navy use very limited	
6. AUTODIN I	R/A	S/A	COMNAVTELCOM	COMNAVTELCOM	IAW Enclosure (5) and Section IV, AUTODIN 1 Terminal Plan (current year)		Navy AUTODIN 1 Terminal Plan (current year)
7. AUTODIN II	R/A or S/A	S/A	COMNAVTELCOM	COMNAVTELCOM	IAW Enclosure (5)	Provide NAVDAC w/info copy of request.	DCA Pamplet AUTODIN II User Reqmts Data Base Format and Instructions, Sep 1978
8. AUTOSEVOCOM	R/A	S/A	CNO or Area Commander	COMNAVTELCOM	IAW Enclosure (5)	Trade off required for AUTOSEVOCOM 1	ACP 121 U.S. SUPP 1(E)
9. AUTOVON	R/A	S/A	CNO or COMNAVTELCOM	COMNAVTELCOM	IAW Enclosure (5) and OPNAVINST 2305.13A	Area Commander approval may be	ACP 121 U.S. SUPP 1(E), OPNAVINST 2305.13A, DCA Circular 310 V175 2 and 370 V175 6
10. Banking Facilities Communications Support	R/A (Host command)	S/A	COMNAVTELCOM	Banking Activity	IAW Enclosure (5)		SECNAVINST 5381.1F
11. Communications Support provided by Non Navy Activities	R/A (Usually a tenant activity)	Host Activity	N/A	S/A	Local Support Agreement	Support requests other than local are forwarded to S/A	SECNAVINST 7020.4C (For Army and AF support)
12. COMSEC General	R/A	S/A	CNO or COMNAVTELCOM	Equipment - COMNAVSECGRU	IAW Enclosure (5) and (7)	COMSEC includes many categories of need. This item is for equipment. See references	OPNAVINSTS C5510.93 B and 2221.5

NOTES

1. Unified (Area) Commanders and Defense Agencies may also validate requirements
2. Use of government furnished equipment in conjunction with foreign leases normally requires host nation approval of such equipment before leases can be consummated
3. Circuit requirements with demanding technical parameters necessitate determination that domestic and foreign carrier transmission facilities as well as on-base cable or other facilities are adequate in number and quality to meet operational dates

Table 5-1 (cont.) GUIDE TO IDENTIFYING & SUBMITTING REQUIREMENTS

TYPE OF SERVICE	WHO SUBMITS	WHO		WHO FUNDS	HOW OBTAINED	SPECIAL CONSIDERATIONS (See Notes 2 and 3)	REFERENCES
		APPROVES	VALIDATES (See Note 1)				
B. Specific Category (cont.)							
13. Coordination Circuits						See Orderwires	
14. Developmental Inquiry (Leased Services)	R/A or S/A	COMNAVTELCOM or Area TCO	N/A	S/A	RFS (Feeder TSR) IAW Enclosure (5)	Normally used to determine feasibility and costs of possible leased services.	OCA Circular 310-130-1
15. Electronic Courier Circuit	R/A	S/A	COMNAVTELCOM	S/A	IAW Enclosures (3) and (5)		
16. Exercise/Temporary Communications	R/A	S/A	CNO has issued stand-by validation	S/A or COMNAVTELCOM	RFS (Feeder TSR) IAW Enclosure (7)	Cite TRN 189-E-174 in Item 417 of RFS	OCA Circular 310-130-1
17. FTS (GSA)	R/A	S/A	COMNAVTELCOM	COMNAVTELCOM	Request to COMNAVTELCOM	Navy use is limited	NAVTELCOMINST 2300.17A
18. Internal Security Industrial Control and Passive Defense	R/A	S/A	S/A	S/A	Equipment Allowance List		OPNAVINST 2300.45
19. Morale, Welfare and Recreation Communications Support	R/A	S/A	S/A, or other depending upon facilities used	R/A or S/A	Request to S/A		DoD Directive 1330.2
20. New Equipment	R/A	S/A	N/A	S/A	IAW Enclosure (7) MILSTRIP	May be centrally planned	OPNAVINST 11010.20, NAVELEXINSTS 4440.63 and 11010.4, NAVSUP Pub. 437.
21. Office Facsimile Transmission Equipment Interconnects	R/A	S/A	COMNAVTELCOM if other than Admin. Telephone System used.	S/A	IAW Enclosure (5)		SECNAVINST 10460.10
22. Orderwires (Local)	R/A	Commanding Officer	N/A	R/A	Locally provided See Enclosure (3)	TTY prefered over voice. TTY normally crypto covered or approved wire-line.	OPNAVINST C5510.93B
23. Orderwires (Extended)	R/A	S/A or DCA	COMNAVTELCOM or DCA	S/A	IAW Enclosures (3) and (5)	TTY preferred over voice. TTY requires crypto cover, normally.	OPNAVINST C5510.93B DCA Circuler 310-50-6

NOTES

1 Unified (Area) Commanders and Defense Agencies may also validate requirements.

2 Use of government furnished equipment with foreign leases normally requires host nation approval of such equipment before leases can be consummated.

3 Circuit requirements with demanding technical parameters necessitate determination that domestic and foreign carries transmission facilities as well as on-base cable or other facilities are adequate in number and quality to meet operational dates.

Table 5-1 (cont.) GUIDE TO IDENTIFYING & SUBMITING REQUIREMENTS

TYPE OF SERVICE	WHO SUBMITS	WHO		WHO FUNDS	HOW OBTAINED	SPECIAL CONSIDERATIONS (See Notes 2 and 3)	REFERENCES
		APPROVES	VALIDATES (see Note 1)				
B. Specific Category (cont.)							
24. Prepositioned TSR	R/A	S/A	COMNAVTELCOM	S/A	IAW Enclosure (5)		DCA Circular 310-130-1
25. Portable Communications Equipment (Fleet)	R/A	S/A	N/A	S/A	Request to S/A		
26. Radio Frequencies	R/A	S/A and NAVEMSCEN	N/A	N/A	Through Frequency Coordinator to NAVEMSCEN		ACP 190 U.S. SUPP-1 ANNEX J, NTP 6, OPNAVINST 2400 70, NWP-4
27. Replacement Equipment (Gov't)	R/A or S/A	S/A	N/A	NAVELEXSYSCOM, NAVSUPSYSCOM, and in some instances, SIA	IAW Enclosure (7) MILSTRIP	May be centrally planned	OPNAVINST 11010.20, NAVELEXINSTS 4440 6B and 11010.4 and NAVSUP Pub 437
28. Restoration Priorities	R/A. Area Commander, as required	S/A	OCS - (Mgr. NCS) Tactical - (FLTCINC)	N/A	DCS. RFS IAW Enclosure (5) Tactical - Request to FLTCINC		OCA Circular 310 130-1, OPNAVINST 2300 36, and NWP-4
29. Security Level Upgrade of Terminal	R/A	S/A and COMNAVTELCOM	NIA	N/A	RFS IAW Enclosure (5)		ACP 121 U S. SUPP-1(E), NTP 4 and OPNAVINST C5510.93B
30. Tactical	R/A or S/A	S/A. Area Commander, if required	CNO or COMNAVTELCOM. In some cases JCS	S/A. COMNAVTELCOM OTHER	IAW Enclosure (5) Major reqmt via OR route to platform sponsor	May be centrally planned	OPNAVINST 9410.1
31. Temporary						See Exercise	

NOTES:

1. Unified (Area) Commanders and Defense Agencies may also validate requirements.
2. Use of government furnished equipment in conjunction with foreign leases normally requires host nation approval of such equipment before the lease can be consummated.
3. Circuit requirements with demanding technical parameters necessitate determination that domestic and foreign carrier transmission facilities as well as on-base cable or other facilities are adequate in number and quality to meet operational dates

Table 5-2 Requirements Data Form

FIELD

FORM	1 S/A	2 ITEM NO.	3 VALIDATION NUMBER	4 GEOGRAPHIC POINT FROM	5 STATE CNTRY	6 GEOGRAPHIC POINT TO	7 STATE CNTRY	8 REQ OP DATE	9 TYPE SERV	10 TYPE OPER	11 MOD/DATA RATE	12 CRYPTO	13 PRIORITY	14 ANNUAL RECUR LEASED COSTS
1	AE	123	T654-81	LONDON	UK	NORFOLK	51	3Q87	COMP	FOUX	2.4KB	KG36R	II-05	38.4
2	AE	123	T654-81	*CINCUSNAVEUR.UIC00061.ASWCCS.C2-OPNAV X78. NO ADDED MANPOWER OR										
3	AE	123	T654-81	*TRAINING REQ. GFE WILL BE IN PLACE. RAPID TRANS VITAL ASW DATA TO										
4	AE	123	T654-81	*OP FORCES IMPOSSIBLE WITHOUT. SAT TX PREFERRED.										

CODE WITH BLOCK LETTERING

To distinguish between similar Alpha/Numeric characters use the following:

102 = NUMBERS IOZ = LETTERS

SAMPLE

FORM	
1	PRIMARY FORM CONTAINING ESSENTIAL INFORMATION FOR IDENTIFICATION, SORTING, AND COMPUTING REQUIREMENTS DATA.
2	FREE FLOWING UNFORMATTED FORMS FOR AMPLIFYING INFORMATION AND REMARKS. FIELDS 1
3	2 AND 3 ARE REQUIRED FOR IDENTIFICATION AND CONTROL AND MUST BE ENTERED ON ALL
4	THREE FORMS. ACTIVITY AND UNIT IDENTIFICATION CODE REQUIRED ON FORM 2.

GSA OPTIONAL FORM 65

APPENDIX 1 TO ENCLOSURE 5

GUIDE FOR SUBMITTING TELECOMMUNICATIONS REQUIREMENTS IN SUPPORT OF ADP

1. Objective. To ensure that telecommunications system planning, programming and budgeting to interconnect and support automated data system (ADS) planning and development are coordinated, timely and consistent with Federal, DOD and Navy policy.

2. Background. DOD Directive 5100.40, Subj: Responsibility for the Administration of the DOD Automatic Data Processing (ADP) Program assigns responsibility for the ADP program. The DOD Directive requires the Secretaries of the Military Departments to designate a senior ADP policy official to administer the DOD ADP Program within the organizational elements under their respective jurisdictions. The Assistant Secretary of the Navy (Financial Management) is the designated Senior ADP Policy Official for the Department of the Navy. One of his assigned responsibilities is: "Ensure that the telecommunications aspects of ADP systems are determined in conjunction with telecommunications elements of the DOD and fully incorporated in ADP systems' concepts and throughout systems' life cycle."

3. Scope. This guide applies to telecommunications services in support of ADP facilities or terminals requiring telecommunications interconnect services. Automated data systems embedded in telecommunications systems are covered by separate instructions.

4. Action.

a. Early identification of telecommunications requirements by major claimants permit programming and budgeting actions in concert with the normal programming and budgeting cycle.

b. COMNAVDAC and COMNAVTELCOM will conduct a joint review of future requirements in conjunction with the annual POM submissions (normally on or about mid-August).

c. Marine Corps commands/activities will continue to submit telecommunications requirements in support of ADP, to CMC in accordance with current Marine Corps directives.

5. Procedure.

a. AUTODIN II. Upon implementation, AUTODIN II will be the means to satisfy communications interconnects for ADP facilities. Exceptions will require operational and/or cost justification to obtain validation for dedicated communications service.

b. ADP Instructions Applicability.

(1) OPNAVINST 5231.1, Subj: Procedures for the Management of Automated Data Systems (ADS) Development, implements SECNAVINST 5231.1, and contains the following policy: "The interdependence of ADP and telecommunications shall be recognized at the outset of ADP or telecommunications system planning and design efforts, and relevant future costs for ADP and associated telecommunications resources shall be identified and considered during the conceptual and programming phases of such systems."

(a) Telecommunications support and interface requirements will be defined by the requesting activity in coordination with COMNAVDAC and COMNAVTELCOM prior to the initiation of detailed design of ADP systems. This will be accomplished by the requiring activity preparing a Subsystem Project Plan (SPP) for major and below threshold telecommunications requirements, and forwarded with the ADS plan.

(b) Minor telecommunications requirements may be incorporated in an SPP or submitted individually. The information outlined in Appendix H of SECNAVINST 5236.1 will assist in defining the requirement.

(2) SECNAVINST 5236.3, Subject: Privacy, funding and other certifications required in procurement of automatic data processing (ADP) equipment and services, states in Section III(2): "Prior to procurement of ADP equipment or services involving data communications, a study should be made of the means by which a data transmission requirement can be satisfied in the most efficient and economical manner, including line, software, and equipment requirements and projected costs."

(a) Individual studies prepared under this instruction will be developed by the requiring activity in

coordination with COMNAVDAC and COMNAVTELCOM. However, submission of an SPP or abbreviated communications plan will satisfy this requirement.

(b) SECNAVINST 5236.1, Subj: Specification, Selection, and Acquisition of Automated Data Processing Equipment (ADPE) outlines the communications requirements information needed to support an ADP facility.

RESPONSIBILITIES AND IDENTIFICATION OF SUBMITTING AUTHORITIES (S/A)

1. Submitting Authorities are identified in Table 6-1.

2. As prescribed by this instruction, the submitting authority will review, approve, or modify, and forward requirements for all activities for whom responsible. Reviews will be made to insure specifically that the provisions of enclosures (3) and (5) have been considered. To assist in this review:

a. Compare submission with the Requirements Checklist found in Table 6-2.

b. Insure that requirements data forms, Table 5-2, have been prepared accurately and an item number assigned.

c. Designate a point-of-contact who can provide additional information.

TABLE 6-1 - IDENTIFICATION OF SUBMITTING AUTHORITIES

CODE	COMMAND
AE	Commander in Chief U.S. Naval Forces, Europe
AF	Commander in Chief U.S. Atlantic Fleet
AR	Commander, Naval Air Systems Command
CM	Comptroller of the Navy
CN	Chief of Naval Operations
CP	Commander, Naval Civilian Personnel Command
CR	Chief of Naval Reserve
DC	Commander, Naval Data Automation Command
EL	Commander, Naval Electronic Systems Command
FE	Commander, Naval Facilities Engineering Command
MC	Commandant, Marine Corps
MS	Chief, Bureau of Medicine and Surgery
NC	Commander, Naval Telecommunications Command
NI	Commander, Naval Intelligence Command
NL	Director of Naval Laboratories
NM	Chief of Naval Material
NR	Chief of Naval Research
NS	Commander, Naval Security Group
NT	Chief of Naval Education and Training
OC	Oceanographer of the Navy
PA	Chief of Office of Information
PF	Commander in Chief U.S. Pacific Fleet
PR	Commander, Naval Military Personnel Command
SC	Commander, Military Sealift Command
SE	Commander, Naval Sea Systems Command
SP	Director of Strategic Systems Project Office (AM-1)
SU	Commander, Naval Supply Systems Command

TABLE 6-2 REQUIREMENTS CHECKLIST

1. Type of action required (new start or major change).

2. Nature of requirement. DCS switched system, Navy tactical or other non-DCS service. Identify specifically.

3. Type of service:

   a. Form - data, printed copy, voice, graphics.

b. Speed - baud rate, bits per second, line blocks or words per minute.

4. Type of information: e.g., command and control, intelligence, administrative, environmental, logistics.

5. Locations: Identify from and to geographic end points and locations.

6. Operational date: Identify by fiscal year and quarter desired.

7. Details of service:

a. Equipment required (whether leased or government furnished).

b. Site preparation or military construction involved including estimated date of completion.

8. Manpower and Training impact: Increase or decrease in manpower with identification of command whose billets or ceiling points are affected. Amount and type of training required.

9. Funding:

a. Leased costs.

b. Cost and source of funding for GFE (including E&I).

c. Any other investment costs with source of funding, e.g., construction or site preparation.

d. Savings realized including leased costs and GFE.

e. Trade-off.

10. Operational justification:

a. Mission, concept of operation, function, correlation with other approved operational needs.

b. Impact on activity or military operations if requirement is not fulfilled.

c. Explain why existing or similar programs will not serve requirement.

d. If dedicated service, explain why the DCS switched networks are not acceptable.

e. Any other requirements which impact upon this request or are related to it.

IMPLEMENTATION OF VALIDATED TELECOMMUNICATIONS OPERATING REQUIREMENTS

1. General.

a. Implementation is the final step in the requirements process leading to an operational capability.

b. Prior to this step, all required resources have been programmed and budgeted or provided for in some other manner. All or part of the following resources may be needed for a particular requirement depending upon its scope:

(1) Military construction (major or minor)

(2) Equipment development and procurement

(3) Operation and maintenance (equipment installation, site preparation, installing equipment, leased services, communications industrial funding, manpower and training).

c. NTS requirements both DCS and tactical may be satisfied by either government furnished or leased services, or a combination of both. Tactical primary facilities are usually government furnished, but may be extended over leased facilities.

d. Normal leadtimes required by DCA to implement services are: overseas - 120 days; CONUS - 60 days. Table 11 of DCA Circular 310-130-1 provides leadtime information for various types of TSR actions.

e. Table 7-1 provides normal implementation milestones.

2. Government Furnished Equipment.

a. The BESEP is the normal vehicle for translating validated operating requirements into a documented statement of resource requirements. It is prepared by NAVELEXSYSCOM Field Technical Authorities in concert with NAVFACENGCOM Engineering Field Divisions. NAVELEXINSTS 10550.4 and 11000.1 refer. The BESEP is prepared in

response to planning of the requiring activity. In some instances, COMNAVELEXSYSCOM may prepare a BESEP as a result of tasking by higher authority or centralized planning, in which case the requiring activity and submitting authority will coordinate.

b. Equipment that is on hand to meet requirements must be identified to COMNAVELEXSYSCOM to insure that only necessary procurement actions are undertaken. Reports submitted under OPNAVINST 2010.3D will be of assistance.

c. New or replacement equipment not requiring a BESEP.

(1) Items under COMNAVELEXSYSCOM management are requisitioned in accordance with NAVELEXINST 4440.6B.

(2) Ship Parts Control Center managed items are obtained in accordance with NAVSUP PUB-437 and MILSTRIP procedures.

d. Publication CMS-4J prescribes procedures for obtaining cryptographic equipment.

e. With prior authorization, station forces may install equipment to meet requirements when it is within their capability.

f. To complete implementation, when DCS transmission or switched network facilities are utilized, the requiring activity submits a RFS (Feeder TSR) in accordance with NAVTELCOMINST 2880.1) (Note that the validation number is cited in part 417).

3. Leased Services.

a. Implementation of new validated requirements by leased services is accomplished by the requiring activity submitting a RFS (Feeder TSR) to the Navy TCO (COMNAVTELCOM) as prescribed in NAVTELCOMINST 2880.1 for action by DECCO.

b. The Navy TCO issues TSRs to implement two types of requests:

(1) Navy requirements for the DCS, which have been validated by COMNAVTELCOM, CNO or other authority.

(2) Requirements validated by COMNAVFACENGCOM for service other than administrative telephone line where a lease by DECCO will provide the least cost service to the Navy.

c. Activities in foreign countries submitting a RFS must consider two points which may increase the leadtime in obtaining service:

(1) Possibility that host nation approval may be required for initial introduction of government furnished equipment that will be connected to the line, e.g., MODEMS or terminal equipment.

(2) The need for prior coordination with host nation or treaty forces when long leased lines are routed over their military facilities.

4. Implementation of routine DCS actions is accomplished by the requiring activity submitting a RFS (Feeder TSR) to the Navy or Area TCO as outlined in NAVTELCOMINST 2880.1. Routine DCS actions include:

a. Disconnects/discontinuances

b. Reroutes

c. Upgrade in rate of service

d. Changes to operating hours

e. Terminal relocations

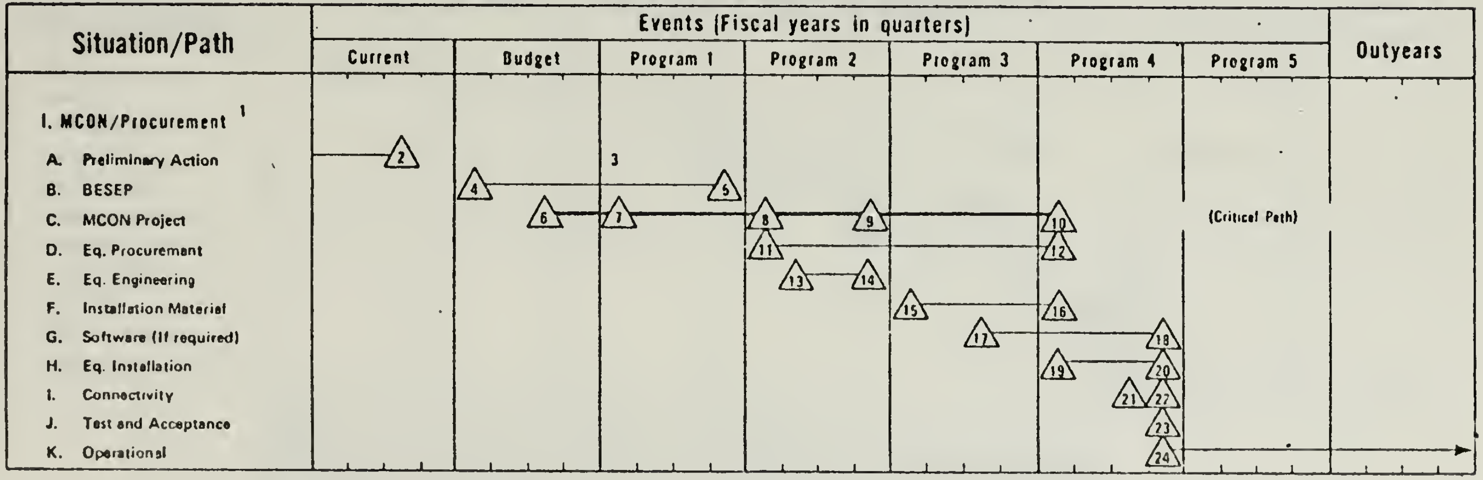
f. Alternate routing (By exception, note that AUTODIN alternate routes must be submitted in accordance with DCA OPLAN 1-75).

g. Data base changes

h. AFRTS funded service.

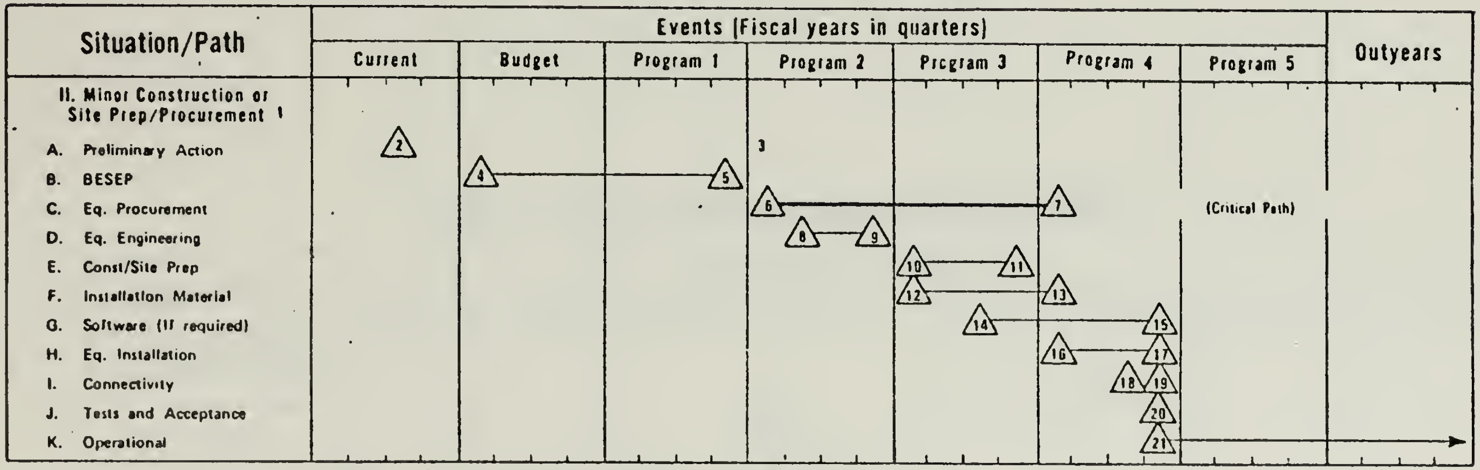
5. Exercise or temporary requirements (less than 12 months) are implemented by the requiring activity submitting a RFS (Feeder TSR) to the Navy TCO in accordance with NAVTELCOMINST 2880.1.

Table 7-1 IMPLEMENTATION MILESTONES



1. This situation requires major construction and communications equipment procurement.
2. The preliminary action event must be completed prior to subsequent events and requires at least 26 months lead time before implementation funds are available (identified in Program Year Two). Preliminary action includes feasibility studies, engineering investigations, master planning, treaty or host nation approval, validation, and submission of the POM input, which is critical. The POM input must identify all resource requirements, including manpower and training. (See Tab A)
3 As the Program Years advance, and become the budget year, budgeted funds must be obligated by the end of that fiscal year. Contract award constitutes obligation. Multi-year procurement contracts are also possible.
4. Start BESEP preparation
5 Final BESEP approved.
6. DoD MCON review.
7. Congressional military construction authorization.
8. MILCON funds available
9. Award of contract and start construction phase.
10. Building beneficial occupancy date for equipment installation.
11. Procurement contract awarded. Pre award contract development actions initiated 3 - 9 months prior to award
12. Equipment delivered In some instances, the contract may require the contractor to engineer, furnish and install (this would include events 13 - 20)
13. In conjunction with final BESEP, start equipment engineering for on-site installation. (*)
14 Complete equipment engineering. (*)
15 Start procurement action for minor bill of material items for equipment installation.
16 Complete procurement of installation material.
17. Start software development if required for automation equipment. *
18. Complete software development.
19 Start equipment installation.
20 Complete equipment installation.
21. Initiate requests for circuits, if DCS or leased facilities are to be used.
22. Circuits installed.
23 Test and acceptance of communications facilities.
24 Facility operational

Table 7-1 (cont.) IMPLEMENTATION MILESTONES



1. This situation requires minor construction or site preparation, and equipment procurement.
2. The preliminary action event must be completed prior to subsequent events and requires at least 26 months lead time before implementation funds are available (identified in Program Year Ywo) Preliminary action includes: feasibility studies, engineering investigations, master planning, treaty or host nation approval, validation, and submission of the POM input, which is critical. The POM input must identify all resource requirements, including manpower and training. (See Tab A)
3. As the Program Years advance, and become the budget year, budgeted funds must be obligated by the end of that fiscal year. Contract award constitutes obligation. Multi year procurement contracts are also possible.
4. Start BESEP preparation
5. Final BESEP approval
6. Procurement contract awarded. Pre award contract development actions initiated 3 - 9 months prior to award.
7. Equipment delivered. In some instances, the contract may require the contractor to engineer, furnish and install (this would include events 12 17).
8. In conjunction with the final BESEP, start equipment engineering for on site installation (*)
9. Complete equipment engineering (*)
10. Develop and award construction or site preparation contract to start construction phase.
11. Building beneficial occupancy date for equipment installation.
12. Start procurement action for minor bill of material items for equipment installation.
13. Complete procurement of installation material.
14. Start software development if requires for automation equipment
15. Complete software development
16. Start equipment installation.
17. Complete equipment installation.
18. Initiate requests for circuits, if DCS or leased facilities are to be used.
19. Circuits installed.
20. Test and acceptance of communications facilities.
21. Facility operational

(*) Resource allocation and effort could be delayed if equipment delivery is slipped.

Table 7-1 (cont.) IMPLEMENTATION MILESTONES

Situation/Path	Events (Fiscal year in quarters)							Outyears
	Current	Budget	Program 1	Program 2	Program 3	Program 4	Program 5	
III. Negligible Site Prep/ Eq Available or Leased [1]								
A. Preliminary Action	2			3		(Critical Path)		
B. Eq Engineering			4	5				
C. Site Prep				6				
D. Eq Installation				7				
E. Connectivity				8 9				
F. Test and Acceptance				10				
G. Operational				11 →	→	→	→	→

1 Under this situation available government equipment with or without lease augmentation will be used. A BESEP is not required and on site preparation costs are $10,000 or less.

2. The preliminary action event must be completed prior to subsequent events and requires at least 26 months lead time before implementation funds are available (identified in Program Year Two) Preliminary action includes feasibility studies, engineering investigations, master planning, treaty or host nation approval, validation, and submission of the POM input, which is critical. The POM input must identify all resource requirements, including manpower and training (See Tab A)

3 As the Program Years advance, and become the budget year, budgeted funds must be obligated by the end of that fiscal year Contract award constitutes obligation Multi year procurement contracts are also possible.

4 Start equipment engineering for on site installation

5. Complete equipment engineering

6 Site preparation accomplished

7 Equipment installed by station forces. If no GFE is used, leased services can result in an operational facility in the fiscal quarter funds are available.

8 Circuits requested

9. Circuits installed.

10 Test and acceptance completed

11 Operational

TAB A - TABLE 7-1 IMPLEMENTATION MILESTONES SUGGESTED FORMAT FOR POM INPUT

CLASSIFICATION: DATE:

SUBMITTING AUTHORITY:
PROJECT TITLE:
DESCRIPTION: (Describe the project, its objectives, activities that will benefit and other descriptive information)
JUSTIFICATION: (State the justification for the project, impact if not approved, provide reference to telecommunications requirement validation, and any other pertinent references; be prepared to forward copies of references).
Program Element: (If more than one P.E., resources must be identified separately for each P.E.)

Resources: ($000/Mpwr in units)

Appropriation Lines: (Eliminate appropriation lines not required for your project).

FY* FY& FY1 FY2 FY3 FY4 FY5

RDT&EN
MCON (R&D)
OPN
O&MN INSTALLATION (OF OPN)
PMC
O&MMC INSTALLATION (OF PMC)
WPN
O&MN INSTALLATION (OF WPN)
APN
O&MN INSTALLATION (OF APN)
SCN
O&MN INSTALLATION (OF SCN)
TOTALS - RDT&E
INVESTMENT
O&M INSTALLATION

(Provide shopping list for costs shown here. List by nomenclature/name, quantity, unit costs, name of activity receiving equipment/MCON. Ensure training facility is provided for unique equipment training prior to project installation.)

Operating Resources: FY* FY& FY1 FY2 FY3 FY4 FY5

O&M,N or O&M,MC - (Identify as follows):

Station Operation - Operating Costs (of telecommunications capability being acquired above).
Station Operation - Maintenance Costs (of telecommunications capability being acquired above).
Project Title: (repeated here for identification only; use on each project sheet).

FY* FY& FY1 FY2 FY3 FY4 FY5

Station Maintenance - Property Maintenance Costs (if any is required to support investment).
Station Costs - Other (specify, if any).
Headquarters Operation - Other (in support of the communications staff, if any).
Leased Telecommunications Costs (specify, if any).
Training Costs (specify, if any).
Other O&M (specify, if any).
TOTAL OPERATING (Less Pay).

Manpower: (Qty in units/salaries in $000).

Officer (N)	Qty Cost	(In separate list, identify types of manpower required, to support quantity shown. For example, a quantity of 12 enlisted could be identified as follows: 9 RM, 3 ET).
Officer (MC)	Qty Cost	
Enlisted (N)	Qty Cost	
Enlisted (MC)	Qty Cost	
Civilian-DHUS	Qty Cost	
DHFN	Qty Cost	
IHFN	Qty Cost	

TOTAL Manpower (in units)
(MilPay)
(CivPay)

* = current year
& = budget year
1-5 = program year

APPENDIX C

SUPPORTING DATA FOR SUBMISSION OF TELECOMMUNICATIONS REQUIREMENTS

1. EXPLANATION OF THE NEED.

a. Explain fully the basis for the new telecommunications need to include, as applicable, military mission and functions and a direct correlation to approved operational, contingency or general war plans, new concepts of operation, new bases and camps, troop deployments, changes of headquarters locations and comparable data. Recommend the military department that should be assigned implementation responsibility.

b. If applicable, identify requirement with current combat operations and units involved. Include an evaluation of the requirement if hostilities cease to include support of post hostilities.

c. State the impact on military operations if the requested communications services and/or facilities are not provided.

d. List all existing approved and programmed communications services and/or facilities which are or will be available to support the particular military function or

to serve the facility (post, camp, base, unit, etc.). For upgrading transmission systems, show the allocation of present channels and the probable allocation of proposed channels along the routes involved to various networks or functions.

e. Explain why existing and programmed communications are deficient. Include traffic engineering reports and other analyses, as applicable, to confirm that existing links are utilized efficiently for essential military requirements. Where applicable, provide traffic delay statistics from actual operation and/or exercises and pinpoint the causes of delay.

f. If dedicated service is requested, explain specifically why such service is necessary as opposed to shared use of facilities.

2. TECHNICAL DATA. State the requirement in terms of communications service and/or facilities needed, to include:

a. The date by which the service or facility is required.

b. The length of time the service or facility will be required.

c. New system/facility or move/change to existing service, facility or circuitry.

d. Specific terminal locations between which telecommunications service is needed. Each requirement specifying the provision of leased equipment will contain a statement that suitable government-owned equipment is not available or cannot be used because of network incompatibilities. DOD Directive 4100.15 pertains.

e. (1) Concept of operation, to include identification of type of service required, e.g., voice, teletype, data, facsimile, television.

(2) Maintenance concept.

(3) Technical parameters of the output of the user equipment, i.e., a telephone with specified signalling, identification precedence outputs, or requiring specially conditioned circuits to pass analog signals within a specified band width or digital signals at a specified bit rate. Also include full duplex, simplex, transmit only, or receive only service.

f. Estimated traffic load per day (number of cards, messages, groups of characters of units or information) for each type of traffic (operational, administrative, logistic, etc.). Traffic volumes will be expressed by precedence in line blocks per twenty-four hour period.

g. Special requirements such as multi-terminations, diverse routing, identification of specific network to which new service is to be added.

h. Proposed restoration priority in accordance with the NCS policy on restoration (NCS memorandum 1-64, dated 21 September 1964).

3. PERSONNEL REQUIREMENTS.

a. Anticipated personnel changes which will be required if the request is approved.

4. MILITARY CONSTRUCTION REQUIREMENTS, as appropriate.

5. BASE RIGHTS, if applicable.

6. FREQUENCY MANAGEMENT aspects of the program and actions underway and/or accomplished for obtaining frequencies.

7. ESTIMATED BUDGETARY REQUIREMENTS to completion of program by fiscal project and any termination liability involved, if known. Specify any possible trade-offs in communications facilities; resource savings that will be achieved, including savings in areas other than communications; improvements in communications or other types of operations or management that will be accomplished; and estimates of savings by reductions in potential losses of men and equipment.

APPENDIX D

INFORMATION REQUIRED IN SUBSYSTEM PROJECT PLAN AND ACCOMPANYING DATA

1. A Subsystem Project Plan is required for each validated telecommunications requirement and will contain:

a. A statement of the objectives and concept of the proposed Subsystem Project.

b. An analysis of alternative proposals (to include trade-offs in other than telecommunications program) with cost estimates for each. Cost estimates will contain a full evaluation of the program and budget implications. Those aspects of the requirement which have the greatest impact on cost will be identified. All data pertaining to the resources required, and the presentation of justification thereof must be expressed in terms of existing fiscal appropriation titles (Procurement, Military Construction, Operation, Operation and Maintenance (O&M), Manpower, and termination liability, if applicable) and fiscal year requirements with a minimum period coverage consistent with the current DOD Five Year Defense Program (FYDP).

c. The recommended alternative.

d. A recommended assignment of responsibility for preparation of management/engineering plan.

e. A recommended assignment of responsibility for execution.

f. A recommended schedule.

g. A statement of the programming, manning and funding implications.

h. Frequency management considerations including actions taken, or underway, as required.

i. Base rights limitations, if applicable.

2. In addition to the above, the following data related to the telecommunications requirement will accompany each Subsystem Project Plan submitted for approval action.

a. Reference to Requirement Validation. State the validating authority, (or other identification) and the date of approval of the operational requirement which the plan supports.

b. Impact Statement. A statement as to the impact of the requirement (Subsystem Project) on:

(1) Other communications systems, projects or facilities with which it interfaces (e.g., AUTOVON, Transmission Upgrading, etc.).

(2) The approved FYDP.

3. Each system project plan will be numbered serially by fiscal years (in which submitted) by submitting DOD component except for DCA. All system project plans pertaining to the DCS will be identified as DCS system project plans and will be submitted by DCA. For example, a plan for the DCS would be submitted by DCA and numbered DCS 1-68. A Navy system project plan, not pertaining to DCS, would be numbered Navy 1-68. The numbers will remain with the plan and not be changed.

APPENDIX E

DEPARTMENT OF THE NAVY
Naval Telecommunications Command
4401 Massachusetts Avenue, N.W.
Washington, D.C. 20390

NAVTELCOMINST 2880.1B
Tel Com-01
18 September 1980

NAVTELCOM INSTRUCTION 2880.1B

From: Commander, Naval Telecommunications Command
To: All Ships and Stations

Subj: Naval Telecommunications System (NTS) Management Procedures-Telecommunications Service Requests (TSRs)

Ref:
(a) OPNAVINST 5450.184C (NOTAL)
(b) DCAC 310-130-1
(c) OPNAVINST 2800.2 (NOTAL)
(d) ACP 121 US SUPP-1
(e) NAVSECGRUINST S2501.1

Encl:
(1) Glossary of Terms
(2) Instructions for Preparing TSRs
(3) Table of Leadtime
(4) Telecommunications Pricing Guide

1. Purpose. To promulgate procedures and guidance to assist naval activities in submitting requests for telecommunications service within the Defense Communications System (DCS). This revision adds enclosures, and should be reviewed entirely.

2. Cancellation. NAVTELCOM Instruction 2880.1A.

3. Background.

a. As directed by reference (a), COMNAVTELCOM serves as the Navy Telecommunications Certification Office (TCO) for the lease or allocation of approved telecommunications services and facilities required by the Navy and other organizations supported.

b. In accordance with reference (b), the TCO submits TSRs to Defense Communications Agency activities for telecommunications service ordering and other actions required to provide user services. These actions are automated under processor control.

4. Discussion

a. Standard procedures for submitting message requests for telecommunications service within the Navy (commonly referred as Feeder TSRs), together with delegation of limited TSR issuing authority to a designated area TCO will expedite TSR processing and improve responsiveness to users.

b. Submission of certain Feeder TSRs requires prior validation in accordance with reference (c).

c. Requests for new lease services and changes to existing services costing in excess of $2,000 annually require funding identification and:

(1) A minimum of 24 months' leadtime to program and budget for new leased services that are under COMNAVTELCOM claimancy. Service requests with a desired operational date less than 24 months in the future require user funding until the program and budget is approved for COMNAVTELCOM.

(2) Requests for leased services funded perpetually by the user (reimburseables) are not subject to the 24-month leadtime restriction. However, DCA requires TSRs be submitted by the TCO with leadtimes as shown in enclosure (3). Pricing information is provided by enclosure (4).

d. Host nation approval (HNA) is required to interconnect government furnished equipment or equipment leased from other than the host nation telephone company to host nation facilities. Currently, HNA is required in Europe (Spain, UK, Germany, Italy and Greece), and is also required by Australia, New Zealand and Singapore. HNA actions processed by DCA Europe (Nalla Europe) and DCA PAC require 6 to 12 months to accomplish.

e. Leased communications services are acquired by the Defense Commercial Communications Office (DECCO) based upon the TSR issued by the Navy TCO. DECCO, by issuance of a commercial service authorization or other type of contract to a tariffed carrier or vendor, becomes the government contracting office. The TCO, in effect, becomes the representative of the contracting office. Once this contractual relationship exists, any changes or amendments required to leased services must be accomplished through the TCO and DECCO.

5. Scope and Applicability. This instruction applies throughout the Department of the Navy to

Headquarters staffs and operating activities with regard to the submission of Feeder TSRs in support of operating forces based ashore and shore activities. These requests may include the start of new services, change to various aspects of existing services or discontinuance of existing services, whether government furnished or leased.

6. Responsibilities

a. CINCPACFLT and CINCUSNAVEUR are designated area TCOs for the Pacific and European theaters, respectively, as coordinated previously.

b. For the purpose of this instruction, Feeder TSRs are divided into three categories with responsibility for processing as outlined below:

(1) **Category I.** Requests processed by the Navy TCO (COMNAVTELCOM), which include: DCS Switched Systems, inter-theater communications connectivity, new service starts, changes to restoration priorities, modifications to existing leased services that will increase annual costs in excess of $2,000, and unusual service outside of these guidelines.

(2) **Category II.** Requests processed by the Area TCOs (CINCUSNAVEUR and CINCPACFLT), which include: disconnects, reroutes, equipment moves, reterminations, data base updates, changes to required dates for service, and modifications of existing leased services costing less than $2,000 annually for the changed service.

(3) **Category III.** Requests pertaining to functions of the Marine Corps (excluding Fleet Marine Force) and the cryptologic, intelligence and data automation commands (COMNAVSECGRU, COMNAVINTCOM, COMNAVDAC).

7. Action for Submitting Feeder TSRs

a. **General procedures.** The requesting activity will:

(1) Submit all Feeder TSRs by message. Insert "DJBT" in the block entitled CIC (Content Indicator Code) on the DD-173 Joint Message Form. Indication of this CIC is mandatory for automated processing of Feeder TSRs.

(2) Refer to enclosure (1) and follow enclosure (2) in preparing Feeder TSRs.

(3) Identify and justify urgent requests in item 106 immediately after the service date.

(4) Indicate the Program Designator Code (PDC) of the major claimant for leased funding purposes in item 117 of the Feeder TSR. If the PDC is unknown, indicate funding responsibility by major claimant or funding activity.

(5) Indicate in item 414 that HNA has been obtained, where applicable.

(6) Indicate in item 417 the requirement validation number assigned by CNO or COMNAVTELCOM and that the local area and NAVCAMS coordination, as appropriate, has been effected.

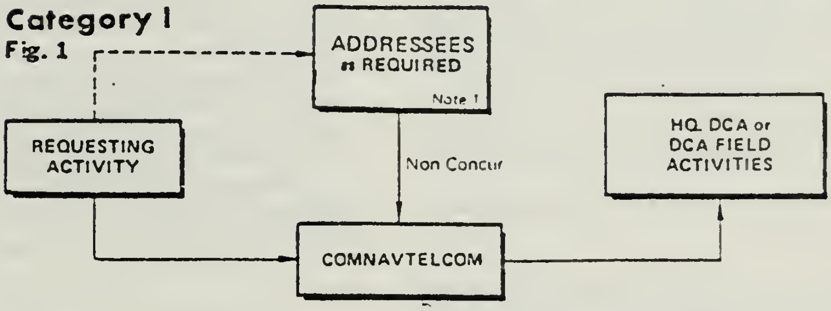
(7) When changes to existing services are required, reference by message date-time-group the original TSR issued by the TCO, and any changes or amendments thereto, and relevant service data; e.g. CCSD, commercial circuit number.

b. **Category I Procedures (See Figure 1).** The requesting activity (including FMFLANT) will submit Feeder TSRs to COMNAVTELCOM for action and to the appropriate Area TCO, Naval Communications Area Master Station (NAVCAMS), and others for information as required by the chain-of command or nature of the service. FMFLANT will include CMC as an information addressee. COMNAVDAC will be included as an information addressee on all Category I feeder TSRs involving data communications services. The Fleet Commander (CINCLANTFLT, CINCPACFLT, CINCUSNAVEUR) or major claimant approval will be indicated in item 503 of the Feeder TSR as "unless otherwise directed." If within 5-working days the Fleet Commander or major claimant has not directed otherwise, COMNAVTELCOM will process the Feeder TSR. For AUTOSEVOCOM, fourwire AUTOVON connections (excluding extensions), restoration priority upgrades or service requests that impact on specific area assets, the Feeder TSR will indicate in item 503 that concurrence has been obtained from the appropriate unified or specified commander as may be required by reference (d), and any area instructions.

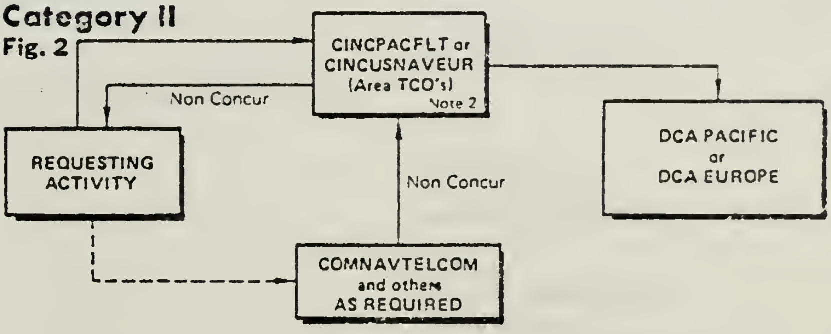
FEEDER TSR FLOW CHARTS

——— Action
- - - - Information

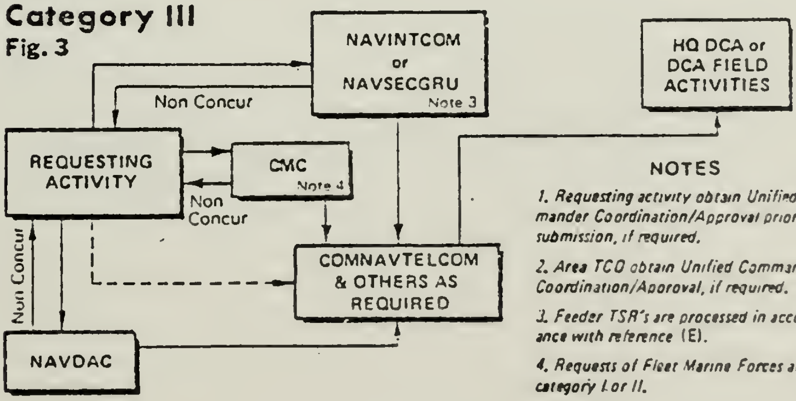
Category I
Fig. 1



Category II
Fig. 2


CINCPACFLT or CINCUSNAVEUR (Area TCO's)
Note 2
Non Concur
REQUESTING ACTIVITY
Non Concur
DCA PACIFIC or DCA EUROPE
COMNAVTELCOM and others AS REQUIRED

Category III
Fig. 3



NOTES

1. Requesting activity obtain Unified Commander Coordination/Approval prior to submission, if required.

2. Area TCO obtain Unified Commander Coordination/Approval, if required.

3. Feeder TSR's are processed in accordance with reference (E).

4. Requests of Fleet Marine Forces are category I or II.

Figures 1, 2 and 3

c. Category II Procedures (See Figure 2). The requesting activity (including FMFPAC and FMFEUR) will submit Feeder TSRs to the Area TCO for action and to COMNAVTELCOM, the appropriate NAVCAMS, and other cognizant addressees for information. FMFPAC and FMFEUR will include CMC as an information addressee. In item 503 indicate COMNAVTELCOM concurrence as "unless otherwise directed." If COMNAVTELCOM has not responded within 5-working days the Area TCO will process the Feeder TSR.

d. Category III procedures (See Figure 3)

(1) The requesting activity under COMNAVSECGRU or COMNAVINTCOM will submit Feeder in accordance with reference (e).

(2) The requesting activity under CMC or COMNAVDAC will submit Feeder TSRs to that command for action and to COMNAVTELCOM and others, as required, for information. Upon concurrence of CMC or COMNAVDAC the Feeder TSRs will be processed by COMNAVTELCOM.

8. Coordination. This instruction has been coordinated with the Commandant for the Marine Corps.

9. Effective Date. This instruction is effective upon receipt.

10. Forms Availability. DD Form 173/2 (Red Edition) and DD Form 173/3 (Blue Edition), (use dependent upon servicing message center), are stocked at the Naval Publications and Form Center, 5801 Tabor Avenue, Philadelphia, PA 19120, and may be ordered under the following stock number: DD Form 173/2 0102-LF-000-1735 and DD Form 173/3 0102-LF-000-1730.

R. M. GHORMLEY

Distribution:
SNDL Parts 1 and 2
MARCORPS Codes H and I

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CO, NAVPUBFORMCEN
5801 Tabor Ave.
Phila., PA 19120 (500 copies)

NAVTELCOM (200 copies)

Table of Leadtimes Required by DCA Activities
(Allow 15 days additional for processing by TCO)

TYPE OF SERVICE	LEASED CONUS	LEASED OVERSEAS (See note 1)	DCS SYSTEMS
STARTS		DAYS	
Point-to-point	50	60	45
AUTOVON/AUTOSEVOCOM Access lines and rehomes	60	65	50
MIOD conversions and major additions or deletions of equipment	60	60	50
Equipment off-the-shelf	120	120	
Equipment other than off-the-shelf	180	180	
AUTODIN			
Access lines with non-computer "off-the-shelf" type terminals e.g. MODE V, SRT	75	80	50 (see note 2)
Access lines, computer-type terminals manufactured as required, and associated peripheral equipment	160	165	50 (see note 2)
Systems or network	90	180	(see note 3)
DISCONNECTS			
AUTOVON/AUTOSEVOCOM service without leased terminals	11	30	15
AUTODIN service with leased ADPE terminals	60	60	15
International services	30	30	15
Other equipment leased only	30	30	
Point-to-point	7	30	15
CHANGES	------------------	(see note 4)	---------
Major			
Minor	30	30	30

NOTES:

1. Actual leadtimes may vary from country to country based upon mutual agreements. TCO should obtain actual required leadtime from the appropriate DCA action agency.
2. Equipment furnished by other means.
3. By plan, not TSR.
4. Generally the same as for starts.

TELECOMMUNICATIONS PRICING GUIDE

1. The rates included here are subject to tarrif and periodic adjustment, and are provided for cost estimating only.

2. For DCS Switched Network service (AUTODIN, AUTOVON) there are two basic costs:

Subscriber Rates - Communications Service Industrial Fund (CSIF) charges which pay for network backbone costs.

Access Line Costs - Charges for circuit, termination, equipment and conditibning, as required. These charges also apply to point-to-point dedicated circuits.

3. Overseas lease costs are not included in this guide because of wide variations and fluctuations. These costs may be obtained from local telephone companies, Area TCOs, or COMNAVTELCOM as may be required.

4. This guide provides information tables as follows:

Table 1. AUTODIN Service
Table 2. AUTOVON Service
Table 3. CONUS Leased Facilities.

TABLE 1

AUTODIN SERVICE

PART I - FY 1981 SUBSCRIBER RATES (EXCEPT FOR QUERY/RESPONSE SERVICE)

VERY HIGH SPEED	AUTODIN I MONTHLY RATES	AUTODIN II MONTHLY RATES
56.0 KB	NOT AVAILABLE	$5,400
19.2 KB	NOT AVAILABLE	4,725
9.6 KB	NOT AVAILABLE	4,050
HIGH SPEED		
4.8 KB	$6,750	$3,375
2.4 KB	5,400	2,700
MEDIUM SPEED		
1.2 KB	4,050	2,025
.6 KB	2,700	1,350
LOW SPEED		
.3 KB & LOWER	1,350	675

PART II - FY 1981 SUBSCRIBER RATES FOR AUTODIN QUERY/RESPONSE SERVICE

ACCESS LINE SPEED	NR OF TERMINALS/ HOST ACCESSED	SR CODE	AREA*	SR CODE	AREA PLUS**	SR CODE	WORLD-WIDE
HIGH SPEED (2400, 4800)	1	L1	$500	L5	$1,500	L9	$2,500
	2	L2	600	L6	1,600	LA	2,600
	3	L3	700	L7	1,700	L8	2,700
	4	L4	800	L8	1,800	LC	2,300
	5	LD	900	LF	1,900	LH	2,900
	6	LE	1,000	LG	2,000	LJ	3,000
MEDIUM SPEED (600, 1200)	1	K1	300	K5	900	K9	1,500
	2	K2	400	K6	1,000	KA	1,600
	3	K3	500	K7	1,100	K8	1,700
	4	K4	600	K8	1,200	KC	1,800
	5	KD	700	KF	1,300	KH	1,900
	6	KE	800	KG	1,400	KJ	2,000
LOW SPEED (75, 150, 300)	1	J1	100	J5	300	J9	500
	2	J2	200	J6	400	JA	600
	3	J3	300	J7	500	JB	700
	4	J4	400	J8	600	JC	800
	5	JD	500	JF	700	JH	900
	6	JE	600	JG	800	JJ	1,000

*Area Service includes one of the following:
(1) CONUS (Excluding Hawaii)
(2) Pacific (Including Hawaii)
(3) Europe

**Area Plus Service includes one of the following:
(1) CONUS to Europe or Europe to CONUS
(2) CONUS to Pacific or Pacific to CONUS

SR= Subscriber Rate

TABLE 2

AUTOVON SERVICE

FY 1981 MONTHLY SUBSCRIBER RATES

Type of Service and Pre-emption capability	MAXIMUM CALL AREA				
	LOCAL			AREA	
Phone: Phone/Secure Voice; Switch Facility, Secure Voice; PBX (two-way service)	EUR	PAC	CONUS	EUR	PAC
Flash	88	1,068	1,364	176	2,136
Immediate	66	801	1,023	123	1,602
Priority	44	534	682	88	1,068
Routine	22	267	341	44	534

	AREA PLUS			GLOBAL
	CONUS to EUR and EUR to CONUS	CONUS to PAC and PAC to CONUS	CONUS to CARIB and CARIB to CONUS	
Flash	3,104	4,328	1,732	6,436
Immediate	2,328	3,246	1,299	4,827
Priority	1,552	2,164	866	3,218
Routine	776	1,082	433	1,609

In addition to Subscriber Rate Charge (SRC) above, the following costs also apply within CONUS:

Connection to Switch/Service Terminal:	Monthly Recurring Cost (MRC)	Non-Recurring Cost (NRC), Inst. cost
	175	114

TABLE 3

CONUS LEASED FACILITIES

A. CIRCUIT CHARGE — MONTHLY RATES PER AIRLINE MILES

1. TELETYPE

	First 100	Next 150	Next 250	Next 500	Each Additional
Up to 75 Baud	$1.25	1.00	0.50	0.40	0.25
Up to 150 Baud	1.55	1.25	0.80	0.50	0.30

2. Voice and Voice Equivalent Data

(300 thru 9600 BPS

Airline Miles	Rate
1	$51.00
2-14	51.00 plus $1.80 for each mile over 1 mile
15	76.20
16-24	76.20 plus $1.50 for each mile over 15 miles
25	91.20
26-99	91.20 plus $1.12 for each mile over 25 miles
100	175.20
100-999	175.20 plus $0.66 for each mile over 100 miles
1000	769.20
over 1000	769.20 plus $0.40 for each mile over 1000 miles

3. Wideband Service

(50 KBS)

Interexchange Channel Rates

Mileage	Rate
1-250	$16.20 per mile
251-500	11.40 per mile
501 and over	8.15 per mile

Channel Rates for Washington DC Metropolitan Area

Mileage	Rate
1 or less	$173.20
each additional ¼ mile or fraction	13.00

B. SERVICE TERMINATION CHARGES

1. TELETYPE	SERVICE TERMINAL EACH LOCATION	RATE (MRC)	INSTALLATION (NRC)
	75 baud Half-Duplex	$40.00	$52.55
	Full-Duplex	44.00	52.55
	150 baud Half-Duplex	60.00	52.55
	Full-Duplex	66.00	52.55

2. VOICE/DATA	SERVICE TERMINAL EACH LOCATION	RATE (MRC)	INSTALLATION (NRC)
	STATION	$25.00	$54.15

3. WIDEBAND	SERVICE TERMINAL EACH LOCATION	RATE (MRC)	INSTALLATION (NRC)
	50KBPS DATA or 19.2 KBPS DATA	$460.00	$216.00

C. EQUIPMENT CHARGES

1. DATA SETS	SERVICE TERMINAL EACH LOCATION (BITS PER SECOND)	RATE (MRC)	INSTALLATION (NRC)
	Up to 300	$21.65	$27.10
	1200 to 1800	38.15	54.15
	2400	59.55	81.20
	4800	135.00	163.00
	9600	249.00	215.00

D. CIRCUIT CONDITIONING

PER LOCATION-EACH CHANNEL

TYPE CONDITIONING	RATE (MRC)	INSTALLATION (NRC)
C1	$ 5.40	None
C2	20.55	None
C3	14.90	None
C5	40.50	None
D1	14.65	$163.00
D2	48.95	157.00
D3	18.00	165.00

APPENDIX F

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20350

SECNAVINST 5231.1A
NAVDAC-10
20 NOV 1979

SECNAV INSTRUCTION 5231.1A

Subj: Life-cycle management of automated information systems within the Department of the Navy

Ref:
(a) SECNAVINST 5230.4 (NOTAL)
(b) SECNAVINST 5230.6 (NOTAL)
(c) SECNAVINST 5233.1B (NOTAL)
(d) SECNAVINST 7000.14B (NOTAL)
(e) SECNAVINST 11120.1D (NOTAL)

Encl:
(1) Directives Cross-Reference
(2) DOD Directive 7920.1 of 17 Oct 78
(3) DOD Instruction 7920.2 of 20 Oct 78
(4) Matrix Chart
(5) Department of the Navy Functional Sponsors

1. Purpose. To implement life-cycle management of automated information systems (AIS) by establishing policies and assigning responsibilities for the overall life-cycle management within the Department of the Navy. Attached at enclosure (1) is a cross-reference of instructions referenced by enclosures (2) and (3). Enclosure (4) illustrates typical management structure for an AIS represented at different approval threshold levels.

2. Cancellation. SECNAVINST 5231.1.

3. Scope. This instruction applies to the design, development, conversion, implementation, modification, and operation of all AIS, encompassed and governed by enclosure (2), within the Department of the Navy, and which will be run on automatic data processing equipment as defined by reference (a). This excludes command and control and communications systems.

4. Policy

a. Except as exempted by paragraph 7, all AIS or revisions thereto will:

(1) Be managed in accordance with this instruction and enclosure (2).

(2) Have a Mission Element Need Statement (MENS) prepared in accordance with enclosure (2).

(3) Have milestones established as outlined in enclosure (2).

(4) Be reviewed and approved at each milestone at the appropriate level of authority as established in reference (b) with the counsel of functional, telecommunications, and automatic data processing (ADP) authorities as appropriate.

(5) Have a functional sponsor designated.

(6) Be documented in accordance with reference (c).

b. AIS or modifications thereto at levels 1, 2, or 3 approval thresholds as established by reference (b) will:

(1) Meet major AIS System Decision Paper (SDP) annex requirements outlined in enclosure (3).

(2) Be justified by an economic analysis prepared during the Definition/Design Phase of the life-cycle process in accordance with reference (d) and enclosure (2).

(3) Be submitted as a definitive or consolidated issue in the Planning, Programming and Budgeting System (PPBS).

c. Standard AIS will be employed to the maximum feasible extent. Such standard systems will be developed and maintained centrally.

d. Proposals for new or revised AIS will be justified on a cost/benefit basis and approved in accordance with reference (b).

e. Multi-functional AIS which involve multiple sponsors will have a primary sponsor identified by mutual agreement and a memorandum of understanding.

f. The amount of detail to be included in the documentation will be commensurate with the complexity of the system.

5. Responsibility. Organizational responsibilities related to ADP actions are defined in reference (a). In addition:

a. Department of the Navy functional sponsors identified by enclosure (5) are responsible for validating requirements which exceed level 3 approval authority, consistent with mission priorities within their purview, and establishing priorities for those requirements.

b. At each major milestone, as identified by enclosure (2), approval authorities identified by reference (b) are responsible for reviewing and approving or disapproving AIS actions within their authority.

c. Functional managers are responsible for establishing requirements leading to system development.

d. Commander, Naval Data Automation Command (COMNAVDAC) is responsible for consolidating and maintaining a file of approved MENS in an effort to anticipate ADP resource requirements, to centrally identify and discourage functional systems development redundancy, and to facilitate ADP management.

6. Action

a. Approval authorities will:

(1) Establish ADP executive committees for review of AIS actions within their authority.

(2) Provide for effective assessment of the status and progress of each AIS.

(3) Provide for approval of each AIS at stated decision points as detailed in enclosure (2).

(4) Take corrective action for each AIS when actual time and cost exceeds planning estimates by 15 percent or more at each major milestone as identified by enclosure (2).

b. Approval authorities at levels 2, 3, and 4 as established by reference (b) will:

(1) Furnish a copy of all approved MENS to COMNAVDAC for all AIS not pertaining to the Marine Corps. The Commandant of the Marine Corps (CMC) will forward a copy of the MENS to the Assistant Secretary of the Navy, Financial Management (ASSTSECNAV FM).

(2) Submit the Telecommunications Subsystem Project Plan (TSPP) to COMNAVDAC who will initiate the telecommunications validation process.

(3) Provide for periodic command inspections or audits of AIS development and life-cycle management to ensure compliance with this instruction.

c. Functional sponsors will:

(1) Ensure that functional, ADP, and telecommunications plans are developed and maintained to reflect objectives, projected functional requirements, and anticipated operating environment.

(2) Obtain funding certification.

(3) Advise COMNAVDAC when an AIS is expected to meet the criteria for a major AIS as defined in enclosure (2). The CMC will advise ASSTSECNAV FM when an AIS is expected to meet these criteria.

(4) Appoint a functional manager for each AIS within their purview.

d. Functional managers will:

(1) Establish functional requirements.

(2) Participate in system acceptance tests.

(3) Formally certify functional adequacy of an AIS.

(4) Appoint a project manager for each AIS and approve a charter stating the responsibility, authority, and accountability of that project manager in the management of an AIS.

(5) Appoint an ADP manager for each AIS.

(6) Appoint a telecommunications manager for each AIS when required.

e. Project managers will:

(1) Coordinate all management aspects of the AIS through the development phase.

(2) Perform functional systems design and planning.

(3) Ensure conformance with functional requirements in the design, development, documentation, and test of the AIS.

(4) Coordinate functional, technical, and telecommunications activities.

(5) Schedule and direct formal milestone reviews.

(6) Exercise the authority to resolve problems related to all phases through Milestone III.

(7) Maintain configuration control of the AIS.

(8) Prepare or ensure the preparation, when required, of the SDP as defined in enclosure (3).

(9) Be directly responsible for the preparation of the Functional Description, Data Requirements Document, and Users Manual as specified by enclosure (3) of reference (c).

f. ADP managers will:

(1) Develop the ADP technical design of the AIS.

(2) Be responsible for development of required application or system software.

(3) Assist with ADP functional systems design and planning.

(4) Participate in reviews as scheduled by the project manager.

(5) Be responsible for the preparation of technical documentation as specified in enclosure (3) of reference (c), specifically:

(a) Systems/Subsystem Specification

(b) Data Base Specification

(c) Program Specification

(d) Computer Operations Manual

(e) Program Maintenance Manual

g. Telecommunications managers will:

(1) Be responsible for the design of telecommunications systems.

(2) Be responsible for test and implementation of telecommunications hardware and software which satisfy functional system requirements.

(3) Develop a TSPP in accordance with reference (e).

(4) Participate in reviews as scheduled by the project managers.

(5) Be responsible for the preparation of telecommunications supporting documentation as required by reference (e).

7. Applicability. AIS which have not completed the concept development phase will comply with provisions of this instruction. AIS in the Definition/Design Phase or succeeding phases may continue to use procedures which were in effect at the initiation of the AIS. Revisions will be managed in accordance with this instruction.

G. A. Peapples
Assistant Secretary of the Navy
(Financial Management)

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DIRECTIVES CROSS-REFERENCE

	DOD Directive 7920.1 References	Navy Implementatio
(a)	DOD Directive 5100.40, "Responsibility for the Administration of the DOD Automatic Data Processing Program," August 19, 1975	SECNAVINST 5230.4
(b)	DOD Directive 5000.1, "Major System Acquisitions," January 18, 1977	SECNAVINST 5000.1A
(c)	OMB Circular A-109, "Major System Acquisitions," April 5, 1976 and associated OFPP Pamphlet No. 1, August 1976	SECNAVINST 5000.1A
(e)	DOD Instruction 7920.2, "Major Automated Information Systems Approval Process," October 20, 1978	Enclosure (3)
(f)	DOD Manual 7110.1-M, "Budget Guidance Manual," August 8, 1975	NAVCOMPTINST 7102.
(g)	Federal Government Accounting Pamphlet No. 4, "Guidelines for Accounting for Automatic Data Processing Costs," 1978	Not yet implemented in DOD Cost Accounting Manual
(h)	DOD Directive 5000.19, "Policies for the Management and Control of Information Requirements," March 12, 1976	SECNAVINST 5260.1 OPNAVINST 5200.19
(i)	DOD Directive 4630.1, "Programming of Major Telecommunications Requirements," April 24, 1968	SECNAVINST 11120.
(j)	DOD Directive 5400.11, "Personal Privacy and Rights of Individuals Regarding Their Personal Records," August 4, 1975	SECNAVINST 5211.5
(k)	DOD Directive 5200.28, "Security Requirements for Automatic Data Processing (ADP) Systems," December 18, 1972	OPNAVINST 5239.1

	DOD Directive 7920.1 References	Department of the Navy Implementation
(l)	OMB Circular A-71, Transmittal Memorandum No. 1, "Security of Federal Automated Information Systems," July 27, 1978	OPNAVINST 5239.1
(m)	DOD Instruction 4100.33, "Commercial or Industrial Activities - Operation of," July 16, 1971	NAVMATINST 4860.12A
(n)	DOD Instruction 7041.3, "Economic Analysis and Program Evaluation for Resource Management," October 18, 1972	SECNAVINST 7000.14B
(o)	DOD Standard 7935.1-S, "Automated Data Systems Documentation Standards," September 13, 1977	SECNAVINST 5233.1B
(p)	DOD Instruction 5000.31, "Interim List of DOD Approved High Order Programming Languages," November 24, 1976	OPNAVINST 10462.8
(q)	DOD Directive 3020.26, "Continuity of Operations, Policies and Planning," July 3, 1974	OPNAVINST 3050.18A
(r)	DOD Directive 5010.19, "Configuration Management," July 17, 1968	NAVMATINST 4130.1A

SECNAVINST 5231.1
NOV 2 0 1979

October 17, 1978
NUMBER 7920.1

ASD(C),ASD(MRA&L),ASD(C^{3}I)

Department of Defense Directive

SUBJECT: Life Cycle Management of Automated Information Systems (AIS)

References:
- (a) DoD Directive 5100.40, "Responsibility for the Administration of the DoD Automatic Data Processing Program," August 19, 1975
- (b) DoD Directive 5000.1, "Major Systems Acquisitions," January 18, 1977
- (c) OMB Circular A-109, "Major System Acquisitions," April 5, 1976 and associated OFPP Pamphlet No. 1, August 1976
- (d) DoD Instruction 5010.27, "Management of Automated Data System Development" November 9, 1971 (hereby canceled)
- (e) through (r), see enclosure 1

A. PURPOSE

This Directive (1) supplements the provisions of reference (a) by establishing joint technical and functional policy governing the life cycle management and control of automated information systems; (2) applies the principles of references (b) and (c) to major automated information systems; and (3) cancels reference (d) and Report Control Symbol RCS DD-COMP(AR)1130.

B. APPLICABILITY AND SCOPE

1. The provisions of this Directive apply to the Office of the Secretary of Defense (OSD), the Military Departments, the Organization of the Joint Chiefs of Staff, and the Defense Agencies (hereafter referred to as "DoD Components").

2. Its provisions govern only those automated information systems utilizing automatic data processing equipment (ADPE) encompassed by DoD Directive 5100.40 (reference (a)).

C. CONCEPT AND OBJECTIVES

1. An automated information system (AIS) is a collection of functional user and ADP personnel, procedures, and equipment (including ADPE) which is designed, built, operated and maintained to collect, record, process, store, retrieve and display information.

2. Life cycle management (LCM) is the process for administering an AIS over its whole life with emphasis on strengthening early decisions which shape AIS costs and utility. These decisions must be based on full consideration of functional, ADP, and telecommunications requirements in order to produce an effective AIS.

3. Overall, the life cycle of an AIS is composed of the broad phases: Mission Analysis/Project Initiation; Concept Development; Definition/Design; System Development; and Deployment/Operation. These phases and the associated policies are described in enclosure 2.

4. The LCM process seeks to achieve the following objectives:

a. Assure management accountability for the success or failure of AIS developments and identify the roles and responsibilities of functional, telecommunications and ADP managers throughout the life cycle of an AIS.

b. Establish a control mechanism to assure that an AIS is developed, evaluated and operated in an effective manner at the lowest total overall cost.

c. Provide visibility for all resource requirements of an AIS and communication with Congress early in the acquisition process for a major AIS.

d. Promote cost effective standardization of AIS for use throughout the Department of Defense.

D. POLICY

1. The LCM concept, guidelines, and documentation prescribed herein and in DoD Instruction 7920.2 (reference (e)) shall be applied to major automated information systems and, as appropriately adapted, employed for each AIS which is not designated as a major AIS.

2. An AIS or significant revision of an existing AIS meeting any one of the following criteria shall be designated as a major AIS:

a. Has anticipated costs in excess of $100 million during the time span from the Mission Analysis/Project Initiation phase through the extension and installation of the developed AIS to all operating sites; or

b. Has estimated costs in excess of $25 million in any single year; or

c. Is designated as being of special interest by the Office of the Secretary of Defense (OSD).

3. Estimates for measurement against these criteria shall be computed in constant dollars of the Mission Analysis/Project Initiation phase year and consider, for this particular computation (a) functional costs such as initiation investigation, requirements definition, test certification; (b) telecommunications costs such as dedicated communications circuits; and (c) ADP costs as shown on the Computer Systems Aggregate Cost Summary in DoD Manual 7110.1-M (reference (f)).

4. A major AIS shall be reviewed and approved at the OSD level in accordance with DoD Instruction 7920.2 (reference (e)), unless it also meets the thresholds/criteria of DoD Directive 5000.1 (reference (b)). In this case, the AIS shall be processed for Secretary of Defense approval in accordance with that Directive.

5. An AIS that does not meet the criteria for designation as a major AIS shall be reviewed and approved at an organizational level designated by the Head of the DoD Component concerned.

6. The review and approval mechanisms used during the life cycle management of any AIS shall include coequal functional, telecommunications, and ADP participation and consultation to ensure full consideration of the economic, technological, and operational factors involved.

7. The Congress shall be informed about major AIS acquisitions as they occur. Defense mission deficiencies, needs and objectives for each major AIS normally shall be reported through the programming and budgeting process. Informal discussions and formal progress reports to congressional authorization, oversight, and appropriation committees are encouraged at regular intervals during the life cycle of each major AIS.

8. Guidelines contained in Federal Government Accounting Pamphlet No. 4 (reference (g)) shall be followed in accounting for actual ADP costs.

9. Specific tasks, decision points, and milestones shall be established within each life-cycle phase of an AIS in order that progress can be assessed and corrective action taken if time or cost slippages occur.

E. RESPONSIBILITIES

1. The Assistant Secretary of Defense (Comptroller) shall:

a. Serve as focal point to integrate and unify the AIS management process within the Department of Defense and monitor compliance with this Directive.

b. Provide for OSD management assessment, in coordination with the appropriate elements of the OSD staff, of each major AIS which does not meet the criteria established in DoD Directive 5000.1 (reference (b)).

c. Participate in OSD management assessment of each major AIS which meets the criteria of DoD Directive 5000.1 (reference (b)).

d. Approve the establishment of information reporting requirements under the provisions of DoD Directive 5000.19 (reference (h)).

e. Process or approve requests from DoD Components for exemption or deferments from the use of Federal Information Processing Standards (FIPS).

2. The Under Secretaries of Defense and Assistant Secretaries of Defense, within their areas of responsibility, shall:

a. Ensure the implementation of the provisions of this Directive, and designate a focal point for coordination purposes.

b. Conduct or provide for participation in the OSD assessment of each major AIS.

c. Ensure that management systems plans are developed to provide for appropriate DoD-wide uniformity and standardization of similar functions in AIS throughout DoD.

d. Develop Executive Agency charters when multi-Component participation is required for development of a DoD-wide AIS.

e. Approve functional changes only after full consideration of the time and cost required to change an AIS.

f. Ensure that telecommunications aspects of an AIS are administered in accordance with DoD Directive 4630.1 (reference (i)).

3. The Head of each DoD Component shall:

a. Ensure that functional, ADP, and telecommunications plans are developed and maintained to reflect objectives, projected functional requirements, anticipated operating environments, and obsolescence conditions.

b. Require functional managers to establish requirements, perform functional system planning and design, maintain configuration control of functional processes, assist in the development of ADP and telecommunication requirements when requested, perform field test, and affirm adequacy of an AIS.

c. Require ADP and telecommunication systems managers to assist functional managers in functional systems design and planning, develop the technical design of the AIS which satisfies the functional requirements, and maintain configuration control of AIS hardware and software.

d. Evaluate DoD policies and criteria and recommend revisions which promote increased AIS efficiency and which preclude non-cost effective modifications to an AIS.

e. Appoint or approve the appointment of a project manager for each major AIS, and develop charters stating the responsibility, authority, and accountability of a project manager in the management of an AIS.

f. Provide for effective assessment of the status and progress of each AIS.

g. Provide for approval of each AIS that is not designated as a major AIS, at stated decision points, and for approval of a corrective action plan for each such AIS when actual time and cost between major milestones exceeds planning estimates by 15% or more.

h. Advise the ASD(C) immediately when an AIS is expected to meet the criteria for a major AIS.

F. EFFECTIVE DATE AND IMPLEMENTATION

This Directive is effective immediately. Forward two copies of implementing instructions to the Assistant Secretary of Defense (Comptroller) within 120 days.

C W Duncan

C. W. Duncan, Jr.
Deputy Secretary of Defense

Enclosures - 3
1. References
2. Life Cycle Phases & Policies
3. Mission Element Need Statement

REFERENCES

(e) DoD Instruction 7920.2, "Major Automated Information Systems (AIS) Approval Process," October 20, 1978
(f) DoD Manual 7110.1-M, "Budget Guidance Manual," August 8, 1975, authorized by DoD Instruction 7110.1, August 23, 1968
(g) Federal Government Accounting Pamphlet No. 4, "Guidelines for Accounting for Automatic Data Processing Costs," 1978
(h) DoD Directive 5000.19, "Policies for Management and Control of Information Requirements," March 12, 1976
(i) DoD Directive 4630.1, "Programming of Major Telecommunications Requirements," April 24, 1968
(j) DoD Directive 5400.11, "Personal Privacy and Rights of Individuals Regarding their Personal Records," August 4, 1975
(k) DoD Directive 5200.28, "Security Requirements for Automatic Data Processing (ADP) Systems," December 18, 1972
(l) OMB Circular A-71, Transmittal Memorandum No. 1, "Security of Federal Automated Information Systems," July 27, 1978
(m) DoD Instruction 4100.33, "Commercial or Industrial Activities - Operation of," July 16, 1971
(n) DoD Instruction 7041.3, "Economic Analysis and Program Evaluation for Resource Management," October 18, 1972
(o) DoD Standard 7935.1-S, "Automated Data Systems Documentation Standards," September 13, 1977, authorized by DoD Instruction 7935.1, September 13, 1977
(p) DoD Instruction 5000.31, "Interim List of DoD Approved High Order Programming Languages," November 24, 1976
(q) DoD Directive 3020.26, "Continuity of Operations," Policies and Planning," July 3, 1974
(r) DoD Directive 5010.19, "Configuration Management," July 17, 1968

LIFE CYCLE PHASES AND POLICIES

A. MISSION ANALYSIS/PROJECT INITIATION

1. The purpose of this phase is to identify a mission element need (set of functional requirements); validate that need; and recommend the exploration of alternative functional concepts to satisfy the need. This phase is completed upon approval of the Mission Element Need Statement at Milestone 0 at a prescribed organizational level and issuance of authority to explore and develop alternative concepts.

2. The following policies apply:

a. The Mission Element Need Statement (MENS) shall be prepared in accordance with enclosure 3 hereto.

b. When feasible, mission needs shall be satisfied through the use of existing DoD Component equipment and resources.

c. Information reporting requirements shall be justified and approved under the provisions of DoD Directive 5000.19 (reference (h)).

d. DoD Component or OSD-directed requirements for standardization, integration, or interface with other automated information systems shall be accommodated. Such requirements will be explicitly identified and documented.

e. Appropriate measures to specify and safeguard vital management and operating information, and assure needed mobility, effectiveness, survivability and continuity of operations in peace and war shall be emphasized. This includes:

(1) Clearly identifying AIS wartime role, if any; and

(2) Designating secure backup facilities or making computers as transportable and as survivable as the principal activities which they support.

B. CONCEPT DEVELOPMENT

1. The purpose of this phase is to synthesize (or solicit and evaluate alternative methods to accomplish the function shown in the approved MENS and to recommend one (or more) feasible concepts for further exploration. A determination is made whether several alternative concepts should be demonstrated or that demonstration should be omitted.

a. If demonstration is decided to be necessary, each functional concept selected for demonstration shall be outlined to the point that the function has been bounded and all risks stated. Competitive demonstrations are intended to verify that the chosen concepts are sound, could perform in an operational environment, and provide a basis for final selection of a concept.

b. During this phase, modeling and simulation of various concepts may be necessary to establish feasible functional baselines for further exploration. This phase is completed upon issuance of approval at Milestone 1 at a prescribed organizational level to demonstrate alternative concepts or to proceed directly to definition and design of an AIS based on a selected concept.

2. The following policies apply:

a. A project manager shall be designated during this phase for each major AIS and given authority to manage all aspects of the AIS. A project manager may be reassigned during the Concept Development, Definition/Design or System Development phases of a major AIS only with the express approval of senior functional and ADP officials. This provision is intended to promote continuity, responsibility and accountability.

b. An AIS to be used by more than one DoD Component shall be assigned to a DoD Component designated as Executive Agent and chartered by the Secretary of Defense.

c. Proposed constraints for the conduct of any demonstration and validation activity will be specified for each alternative. The constraints will establish the basis on which to continue or terminate the effort for each alternative through completion of the demonstration.

d. The interface of ADP, telecommunications and other supporting elements shall be recognized as an integral part of the AIS from the outset of planning and analysis efforts. Technical systems concepts, requirements, specifications and costs for communications assets shall be identified and coordinated with appropriate communications organizations during this phase and throughout the life cycle of each AIS in accordance with DoD Directive 4605.1 (reference (i)).

e. Preliminary requirements for the protection of information shall be identified in this phase and refined during follow-on phases. Such requirements shall be in accordance with DoD Directives 5400.11 and 5200.28 and OMB Circular A-71, Transmittal Memorandum No. 1 (references (j), (k) and (l)).

f. Necessary contractor versus in-house analysis shall be prepared in accordance with DoD Instruction 4100.33 (reference (m)).

C. DEFINITION/DESIGN

1. The purpose of this phase is to define fully the functional requirements (system/subsystem specifications) and to design an operable AIS. This phase is completed when ADP and telecommunications technical adequacy has been validated and upon issuance of approval at Milestone II at a prescribed organizational level to develop fully the system.

2. The following policies apply:

a. Functional requirements and processes to be automated shall be documented and validated by an appropriate senior functional policy official before an AIS design is commenced. As a minimum, the functional documentation shall specify functional operational requirements and a detailed description of the function to be supported by automation.

b. Specific objectives expressed in terms of performance measures shall be established for each AIS project, supported by initial feasibility studies and economic analyses prepared in accordance with DoD Instruction 7041.3 (reference (n)), and refined in follow-on phases.

c. A new AIS may be designed only after it has been determined that an existing AIS, including one available from another DoD Component or off-the-shelf from industry, cannot be used or economically modified to satisfy validated functional requirements.

d. AIS designs shall exploit proven technology.

e. Each AIS shall be constructed in a modular structure providing a direct relationship of each module to the mission/function supported, unless another design technique is approved as more appropriate. As a goal, the overall AIS will be conceived and sized in a manner that will permit the developmet and evaluation of each module within 9 to 12 months after detailed design of the AIS has been completed. Such practices will contribute to logic visibility, reliability, maintainability, and reduce the risk and cost associated with evaluation and validation.

f. AIS design shall include provisions that will facilitate appropriate functional and technical audit of the AIS.

g. Requirements for specialized functional and technical training to operate an AIS, including associated time and costs, shall be identified in this time period and updated during follow-on phases. Proper coordination and adequate lead time for implementation shall be provided system users and training organizations.

D. SYSTEM DEVELOPMENT

1. The purpose of this phase is to develop, integrate, test and evaluate the ADP system and the total AIS. This phase is completed upon approval of the AIS by appropriate functional officials as satisfying the mission need; and issuance of approval at Milestone III at an appropriate organizational level to deploy and operate the approved AIS.

2. The following policies apply:

a. Each AIS development shall be supported by documented plans. The scope of ADP system life cycle management documentation shall be appropriate to the resource investment contemplated and consistent with the principles stated in this Directive and in DoD Standard 7935.1-S (reference (o)).

b. Where an AIS must operate under both peacetime and wartime conditions, the development shall provide for immediate readiness and transition from one condition to the other without need for retrofit or redesign.

c. Modern software development concepts such as top down design, chief programmer teams, design walk-throughs and program libraries shall be used wherever practicable.

d. The DoD standard high order programing languages are specified in DoD Instruction 5000.31 (reference (p)). The National Federal and/or DoD specifications for these languages shall be used. The use of specific DoD standard high order languages in AIS shall be based on the capabilities of the language to meet the system requirements as follows:

(1) Nonstandard high order programing languages may be used for classes of applications where, for technical reasons, the use of a DoD standard high order programing language would not be feasible. Such use shall be approved by the DoD Component Senior ADP Policy Official and an information copy of the determination shall be sent to the ASD(C).

(2) Machine dependent assembly languages may be used when the DoD standard high order programing language does not have the capability to accomplish required functions, and where it would not be cost beneficial to have the capabilities added to the DoD standard high order programing language compiler. Such use shall be approved by the DoD Component Senior ADP Policy Official and an information copy of the determination shall be sent to the ASD(C).

(3) Use of implementer defined features and vendor supplied nonstandard extensions in high order programing languages compilers shall be avoided.

e. A plan for continuity of operations shall be prepared for each AIS in accordance with DoD Directive 3020.26 (reference (q)).

f. Any AIS, including those that will operate at multiple sites, shall be field tested at one (or more) representative operational sites, using actual functional transaction data, and shall be certified for adequacy by appropriate authority covering functional and technical interests prior to operation.

g. All components of the AIS (functional, ADP, and telecommunications requirements) shall be managed as configured items. The terms, tools and techniques contained in DoD Directive 5010.19 (reference (r)) and those developed and approved by DoD Components shall be adopted or adapted for such configuration management of an AIS.

E. DEPLOYMENT AND OPERATION

1. The purpose of this phase is to (a) implement the approved operational plan, including extension/installation at other sites; (b) continue approved operations; (c) budget adequately; and (d) control all changes and maintain/modify the AIS during its remaining life using well defined configuration management procedures.

2. The following policies apply:

a. No AIS shall be made operational, including an AIS to be extended beyond its initial operation test site, without ensuring that the implementation plans, including training and resource availability, are sufficient to support the schedule for operations.

b. Computers designated as transportable field units shall be field tested periodically to assure that they can operate in field environments and that adequate power supplies and transportation support are available.

c. Each operational AIS shall be reevaluated on a periodic basis to assure that the AIS continues to operate efficiently and to meet functional requirements in a cost effective manner.

d. Prior to upgrading the ADPE of an AIS, the AIS shall undergo a performance evaluation and opportunities for sharing shall be explored.

e. An AIS which no longer serves a significant need shall be expeditiously terminated.

MISSION ELEMENT NEED STATEMENT (MENS)

A. REQUIREMENT

A MENS shall be prepared to describe in written form a mission deficiency and to justify the exploration of alternative solutions (including automation) of the deficiency. An adaptation of the MENS shall be used for systems not designated as major systems. Since the MENS is a management document, it normally should not exceed 4 to 6 pages in length.

B. CONTENT

1. Mission Area Identification

a. Identify mission and authority for accomplishment.

b. Describe the current organizational and operational environment.

c. Describe the relative priority of the need to other mission needs of the DoD Component.

2. Deficiency

a. Describe scope of mission deficiency or nonperformance. Avoid doing so in terms of the capabilities and explicit characteristics of automatic data processing equipment or of automated information systems.

b. Describe need in terms of the job to be accomplished and mission results or outcomes to be achieved.

3. Existing and Programed DoD Capabilities

a. Describe capabilities to accomplish the mission without a new capability.

b. Assess impact on operations by maintaining status quo.

4. Constraints. Identify constraints that could apply to the exploration and acceptance of alternative solutions to the mission deficiency. These could include such matters as the following:

a. Operational and logistics limitations, organizational or special considerations.

b. Interservice, intraservice, and NATO standardization and interoperability requirements.

c. Interface with existing automated information systems.

d. Limits on investment that should/will be placed on the acquisition of the new capability.

e. Limits on recurring or operating costs; or

f. Timing of need.

C. PROCESSING AND COORDINATION

1. DoD Component Heads or their designees will ascertain whether a MENS is required to be submitted to OSD in accordance with the definition of major systems.

2. DoD Components may send a draft MENS to OSD for informal assistance during preparation, if desired.

3. The official MENS will be addressed as follows:

a. To the Secretary of Defense through the Defense Acquisition Executive for those systems which meet the criteria of DoD Directive 5000.1 (reference (b)).

b. To the Assistant Secretary of Defense responsible for the mission area for those systems which meet the other AIS thresholds prescribed by this Directive.

c. To the appropriate organizational level designated by the Head of the DoD Component concerned for those systems which are not designated as major systems.

October 20, 1978
NUMBER 7920.2

ASD(C),ASD(MRA&L),ASD(C3I)

Department of Defense Instruction

SUBJECT: Major Automated Information Systems Approval Process

Refs: (a) DoD Directive 7920.1, "Life Cycle Management of Automated Information Systems," October 17, 1978
(b) DoD Directive 5000.1, "Major Systems Acquisitions," January 18, 1977

A. PURPOSE

This Instruction supplements the provisions of reference (a) by establishing the review and decision process and procedures for major automated information systems (AIS).

B. APPLICABILITY AND SCOPE

1. The provisions of this Instruction apply to the Office of the Secretary of Defense, the Military Departments, the Organization of the Joint Chiefs of Staff, and the Defense Agencies (hereafter referred to as "DoD Components").

2. Its provisions encompass only those major automated information systems defined in reference (a), which are below the thresholds established by reference (b).

C. DECISION PROCESS AND RESPONSIBILITIES

1. System Decision Paper (SDP) Process. The successful management of an AIS requires the combined and integrated efforts of functional, ADP and telecommunications organizations and personnel. The SDP process provides for appropriate policy level involvement in key decisions during the life cycle of each major AIS and shall be employed as follows:

a. An SDP shall be prepared following the approval of the Mission Element Need Statement to support DoD Component and OSD reviews, coordination, and decision before continuation of the AIS development. Requirements for the System Decision Paper are prescribed in enclosure 1.

b. After review and concurrence by the appropriate senior policy officials of the initiating DoD Component, the SDP shall be forwarded to the Assistant Secretary of Defense (Comptroller) (ASD(C)) for coordination of OSD review and decision.

c. The OSD decision shall be recorded in the SDP and returned to the DoD Component concerned for action.

d. The SDP shall be maintained in an updated status by the project manager and resubmitted to the OSD at the next milestone.

2. OSD Review and Approval

a. OSD reviews shall be conducted at designated decision points during the AIS life cycle. Life cycle phase milestones and tasks are prescribed in enclosure 2.

b. The OSD review and approval of each major AIS shall be conducted by a group composed of the Assistant Secretary of Defense (Comptroller) (ASD(C)), the OSD system sponsor; the Assistant Secretary of Defense (Communications, Command, Control and Intelligence) (ASD(C3I)); and other OSD principals as identified by the group.

(1) The OSD principal (an Under Secretary of Defense or an Assistant Secretary of Defense) having cognizance over the functional area to be supported by the AIS shall be the OSD system sponsor. Where functional applications cross the functional interests of more than one OSD principal, the one having primary interests shall assume the role of OSD system sponsor.

(2) Normally, the OSD system sponsor shall coordinate the OSD reviews and decisions to proceed into the Mission Analysis/Project Initiation and Concept Development phases; the ASD(C) shall coordinate the OSD review and decision to proceed into the Definition/Design, System Development and Deployment/Operation phases.

c. The DoD Components having direct interest in the AIS shall advise the OSD as requested by the group.

d. A staff member within each of the offices of the OSD system sponsor, the ASD(C), and the ASD(C3I) shall be designated as point of contact for each major AIS.

3. Approval Process Relationships

a. The major AIS approval process complements the programing, planning, and budgeting system (PPBS) by concentrating on key issues related to AIS development progress and on effective OSD reviews at key milestones. Major AIS decisions must fit into the affordability framework of the PPBS where OSD decisionmaking is keyed to the balancing of all programs within established DoD fiscal limits.

b. Each major AIS shall be submitted as a definitive line in the Program Objectives Memorandum (POM) and as separate ADP budget exhibits.

c. OSD initiatives and objectives for major AIS shall be reflected in the annual Consolidated Guidance Memorandum (CGM) by appropriate OSD principals.

d. AIS review decisions shall be reflected in the Five Year Defense Program (FYDP) at the next scheduled update. This shall be accomplished either (1) during the Program Objectives Memorandum/Program Decision Memorandum process; or (2) during the budget submission process, depending on when the OSD review is accomplished and the related decision is made.

e. In cases where a POM or budget submission to OSD deviates significantly from a previous AIS decision, this fact, including cost/schedule performance impact, shall be noted and explained.

f. Each SDP affected by an approved program or budget decision shall be updated within 30 days, referencing the appropriate decision document.

4. Waivers. Specific system circumstances may dictate the need for DoD Components to deviate from the procedures prescribed herein. When appropriate, the Head of the DoD Component concerned may request a waiver of particular requirements of this Instruction from the Assistant Secretary of Defense (Comptroller), citing the circumstances that justify such waiver.

D. EFFECTIVE DATE AND IMPLEMENTATION

This Instruction is effective immediately. Forward two copies to the Assistant Secretary of Defense (Comptroller) within 120 days.

Fred P. Wacker
FRED P. WACKER
Assistant Secretary of Defense
(Comptroller)

SYSTEM DECISION PAPER

A. The System Decision Paper (SDP) supports the OSD and DoD Component decisionmaking process during the development of an AIS. It is the principal document for recording the essential information on the AIS; such as mission need, concept, milestones, thresholds, issues and risks, alternatives, cost/benefits, management plan, supporting rationale for decisions; affordability in terms of projected budget and out-year funding; and the decisions made by the OSD.

B. The SDP shall contain the data pertinent to the life cycle phases prescribed in DoD Directive 7920.1 (reference (a)) and in enclosure 2.

1. The SDP shall be submitted for each major new AIS or major modification to a deployed AIS. As the major project evolves, the functional, ADP, and related telecommunications plans submitted in the SDP shall comprise the full AIS life cycle planning. The SDP shall include an alternative plan to minimize operational risk of system failure if automation objectives are not achieved.

2. The SDP shall focus on the particular life cycle phase of the AIS, related issues and the specific decision needed. Depending on the milestone involved, it shall contain:

a. The approved Mission Element Need Statement (MENS) (as an annex) and current information updating the MENS (as a cover sheet to the MENS annex).

b. Project management structure and plan annex.

c. An annex summarizing the acquisition strategy.

d. Logistics and training support annex, if appropriate.

e. Resources annex which shall include a cost/benefit analysis of the AIS life cycle when initially developed, and shall be gradually refined and updated as the AIS progresses through its milestones. The annex shall perpetuate the record of previously allocated DoD Component resources and indicate any changes to previous estimates for the AIS.

f. Test and evaluation plan annex and up-to-date status changes.

3. The SDP shall be prepared and updated by the DoD Component functional initiator if a project manager has not been designated.

4. During the OSD coordination of the SDP, key issues shall be clearly defined. Conflicting viewpoints shall be summarized and documented. The SDP shall be endorsed to reflect OSD review results, recommendations and decisions.

5. The SDP shall remain in existence throughout the life of a major AIS.

AUTOMATED INFORMATION SYSTEMS MILESTONES AND TASKS

A. MISSION ANALYSIS/PROJECT INITIATION

1. The purpose of this phase is to identify a mission need (set of functional requirements); validate that need; and recommend the exploration of alternative functional concepts to satisfy the need. This phase is completed upon approval of the Mission Element Need Statement (MENS) at Milestone 0 and issuance of authority to explore and develop alternative concepts.

2. The MENS shall be prepared and processed for approval in accordance with DoD Directive 7920.1 (reference (a)).

3. Milestone 0 Decision. Approval of the MENS by OSD permits the DoD Component to proceed to identify alternative concepts to satisfy the functional need.

B. CONCEPT DEVELOPMENT

1. The purpose of this phase is to synthesize (or solicit) and evaluate alternative methods to accomplish the function shown in the approved MENS and to recommend one (or more) feasible concepts for further exploration. A determination is made whether several alternative concepts should be demonstrated or that demonstration should be omitted.

a. If demonstration is decided to be necessary, each functional concept selected for demonstration shall be outlined to the point that the function has been bounded and all risks stated.

b. Competitive demonstrations are intended to verify that the chosen concepts are sound; could perform in an operational environment; and provide a basis for final selection of a concept. During this phase, modeling and simulation of various concepts may be necessary to establish feasible functional baselines for further exploration.

c. This phase is completed upon approval at Milestone I to define and design an AIS based on a selected concept.

2. The tasks to be completed prior to Milestone I and addressed in the SDP submitted for that decision are:

a. The mission need is reaffirmed to be essential.

b. A project manager has been appointed and chartered, and necessary staffing approved.

c. The alternative system design concepts adequately reflect a broad segment of the technology base and provide an acceptable competitive environment.

d. Functional objectives have been prioritized.

e. Detailed functional descriptions (inputs, processes, outputs and interfaces) have been developed and validated.

f. The alternatives recommended for demonstration satisfy the mission element needs.

g. The projected resource investment for the selected alternatives are estimate d and are consistent with the stated constraints.

h. Preliminary plans adequately describe a concept for training, logistical support, organizational relationships and, if appropriate, operation of an automated system.

i. Use of available and existing Government and commercial hardware and software is adequately considered.

j. The acquisition strategy effectively integrates the technical, business and management elements of the project and supports the achievement of project goals and objectives.

k. Joint Services considerations are adequately treated in the planning.

l. Standardization and interoperability requirements have been adequately considered.

m. Risk and uncertainty areas are identified and adequately treated in the planning.

n. Strategies to facilitate the transition of the current functional system to any of the alternative systems to be explored have been conceived.

o. Configuration management discipline has been established for control of functional requirements.

p. Electronic countermeasure performance requirements have been identified.

q. Planning for preparation of a test and evaluation plan is adequate.

3. Milestone I Decision. OSD considers the updated SDP to ascertain the adequacy of planning and determines

whether to proceed to definition/design of an AIS based on a single concept.

C. DEFINITION/DESIGN

1. The purpose of this phase is to define fully the functional requirements (system/subsystem specifications) and to design an operable AIS. This phase is completed when ADP and telecommunications technical adequacy has been validated and upon issuance of approval at Milestone II to develop fully the system.

2. Tasks to be completed prior to Milestone II and addressed in the SDP submitted for that decision are:

a. The mission need is reaffirmed.

b. The functional system design has been revalidated and the baseline for the functional system has been updated.

c. AIS specifications for hardware, software and data bases have been developed.

d. Plans for logistics support, training, operational test and evaluation, configuration management, organizational relationships, development and acquisition have been updated.

e. Risk analysis to reflect the total AIS development has been reassessed.

f. A thorough and complete economic analysis has been prepared.

g. A configuration management discipline for the total AIS has been established.

h. Computer acquisition plans to obtain the required automatic data processing equipment (ADPE) and other resources are finalized.

3. Milestone II Decision. OSD reviews the updated SDP to ascertain the (a) general progress of the project; (b) overall completeness and adequacy of the AIS design specifications; (c) thoroughness of the various planning documents; and (d) updated risk and economic analysis. OSD approval at this point permits full scale development of the ADP system.

D. SYSTEM DEVELOPMENT

1. The purpose of this phase is to develop, integrate, test and evaluate the ADP system and the total AIS. This

phase is completed upon approval of the AIS by appropriate functional officials as satisfying the mission need; and issuance of approval at Milestone III to deploy and operate the approved AIS.

2. Tasks to be completed prior to Milestone III and addressed in the SDP submitted for that decision are:

a. The mission need is reaffirmed.

b. Computer programs and data bases have been fully developed.

c. Standardization and interoperability requirements have been satisfied.

d. System support documentation has been developed. This includes maintenance manuals, user manuals, and operation manuals.

e. Unit and system(s) level test and evaluation results support a decision to proceed with deployment.

f. The results of the functional configuration audit, the physical configuration audit, and the product verification review have been evaluated; all support products (e.g., users manual, maintenance manual) have been reviewed.

g. An intensive internal review has certified that the developed AIS satisfies the AIS design and functional requirements.

h. Life cycle schedule, cost and budget estimates are realistic and acceptable.

i. The system is cost effective and affordable and remains the best alternative.

j. Trade-offs have been made to balance cost, schedule and performance effectively.

k. The acquisition strategy has been updated and is being executed.

l. The end products of development are controlled as configured items.

m. Business planning supports the acquisition strategy and provides flexibility for delivery rates and quantities when options are used.

n. Issues concerning delivery, quality assurance and facilities are identified and managed satisfactorily or resolved.

o. The project management structure and plan are sound and adequately supported.

p. Planning for deployment is adequate including manpower and training, logistics readiness, operational considerations, and integration with existing operational systems.

3. Milestone III Decision. OSD reviews the updated SDP and determines whether the developed and tested AIS is ready to be deployed for operation at the operating site(s).

E. DEPLOYMENT/OPERATION

1. The purpose of this phase is to (a) implement the approved operational plan, including extension/installation at other sites; (b) continue approved operations; (c) budget adequately; and (d) control all changes and maintain/modify the AIS during its remaining life, using well defined configuration management procedures.

2. System Effectiveness Milestone(s). Reviews shall be conducted by the DoD Component concerned, with OSD participation if required at convenient time periods after the first year of full system operation. The intent of the periodic reviews is to determine if the system effectively serves its users, to identify potential obsolescence, and validate/certify continued need for the system. As found necessary, action will be taken to phaseout or terminate in a manner that will not adversely affect the supported mission or other systems that interface with the automated information system.

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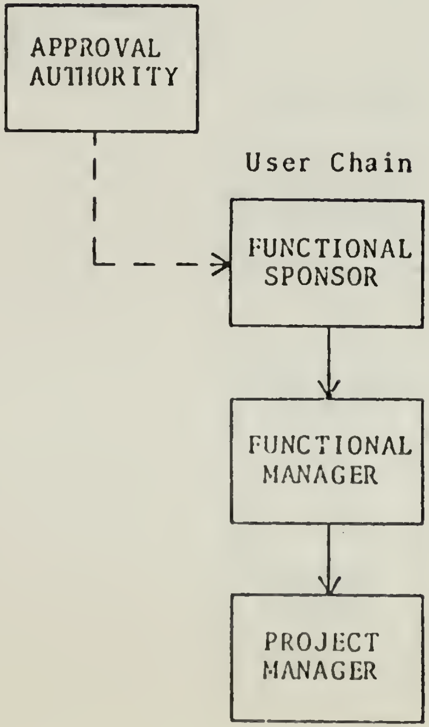
SUPPORT FORCES
(EXAMPLE ONLY)



	Level 1 or 2	Level 3	Level 4
APPROVAL AUTHORITY	ASSTSECNAV FM/ CNO (COMNAVDAC)	CHNAVMAT	SYSCOM
FUNCTIONAL SPONSOR	CNO- OP CODE	CHNAVMAT- FUNCTIONAL CODE	SYSCOM- FUNCTIONAL CODE
FUNCTIONAL MANAGER	CHNAVMAT/ SYSCOM	SYSCOM/LAB	SYSCOM/ FIELD ACTIVITY
PROJECT MANAGER	AS ASSIGNED	AS ASSIGNED	AS ASSIGNED

MATRIX CHART
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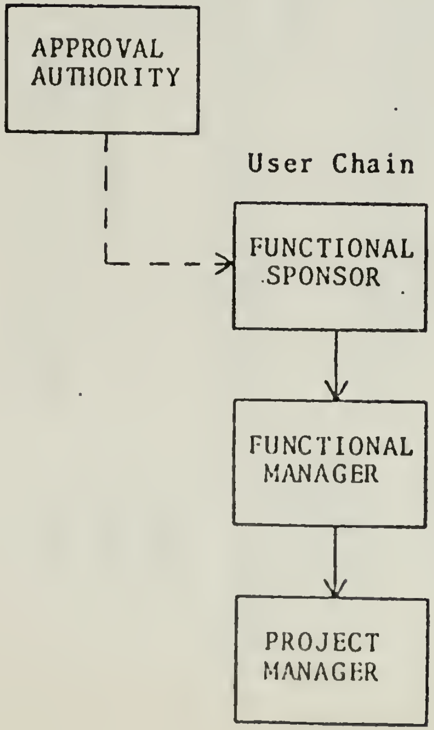

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APPROVAL AUTHORITY	ASSTSECNAV FM/ CNO (COMNAVDAC)	FLTCINC	TYCOM
FUNCTIONAL SPONSOR	CNO- OP CODE	FLTCINC- FUNCTIONAL CODE	
FUNCTIONAL MANAGER	FLTCINC/ TYCOM	TYCOM/ NAS NAVSTA SUBASE	
PROJECT MANAGER	AS ASSIGNED	AS ASSIGNED	

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28. Base Operating Support	OP-04

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